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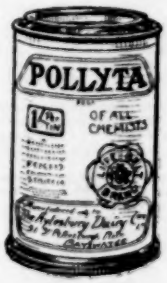

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An Address

ON

THE PATHOLOGICAL INVESTIGATION OF THE CAUSATION OF INSANITY.

Delivered before the Brighton and Sussex Medico-Chirurgical Society on Feb. 1st, 1906,

BY F. W. MOTT, M.D. LOND., F.R.C.P. LOND., F.R.S.,

PATHOLOGIST TO THE ASYLUMS COMMITTEE OF THE LONDON COUNTY COUNCIL AND PHYSICIAN TO CHARING CROSS HOSPITAL.

PART I.

GENTLEMEN,—There is no subject in medicine which offers so wide a field of research, about which so little is known, and of which the importance to the State and to the nation is acknowledged on all sides. The newspapers continually proclaim the great increase of insanity and the ratepayers continually exclaim against the taxation incidental to the maintenance of the increasing numbers of the inmates of the pauper lunatic asylums. How can the public think otherwise than that a vast and increasing number of the population are going mad?

Let us first consider, what is insanity? An individual is considered insane whose conduct is anti-social, when, owing to a morbid state of his mind, he no longer feels, thinks, or acts in accordance with the usages and customs of the society in which he lives. That it is hard to draw a line between criminality and insanity is shown by the fact that most classifications of insanity find it necessary to include a class of moral insanity. Now there are many conditions which have contributed to the increase in the number of persons who are segregated in lunatic asylums and they may be classified thus: (1) with the improvement of the moral and social conditions of the population the standard of sanity has been raised; (2) large numbers of the harmless imbeciles and feeble-minded are now segregated; (3) a large number of old people who suffer with mental derangement from senile decay instead of being kept in workhouses or their homes are sent to lunatic asylums; and (4) the treatment of pauper lunatics has become so humane and the fact that they are better fed, housed, and cared for (as a rule) than they had been accustomed to before has led to the friends having no reluctance to getting rid of the responsibility of their care, thus depleting the homes which in former times would have sustained them. Still, allowing that all these causes tend to swell the number of certified lunatics, conditions incidental to town and city life tend to make the nervous system a *locus minoris resistentiæ* and mental affections are proportionally increased, especially general paralysis and alcoholic insanity.

A pathology which only considers the morbid macroscopic and microscopic anatomy is useless; there must be a correlation of the clinical and psychological symptoms with the morbid physical, chemical, and structural changes of the organs and tissues of the body, particularly of the brain. No one who has had any practical experience of insanity can come to any other conclusion than that the majority of people become insane because there is an inborn tendency in their nature. In fact, the pathology of the causation of insanity of an individual resolves itself into a study of his personality—what he was born with and what happened to him after birth. Numbers of factors may conspire or combine after birth to bring out this innate tendency to mental derangement. It may be asked, Can a stock which is sound mentally become unsound by its members being subjected to an unfavourable environment? Many people deny the possibility of mutation in the germ plasm, but as the nervous system is the latest and most complex and differentiated tissue in structure and function, mutations and variations may occur in consequence of favourable or unfavourable environment. The commingling of the germ cells of two stocks of suitable or unsuitable temperaments may by a happy or unfortunate chance produce sporadic genius or sporadic insanity.

Any statistics relating to heredity and insanity which do not take into consideration the numbers of the members of the family born, whether they live or die, on both sides, direct and collateral, are, according to the experience of statisticians, untrustworthy. The chances of a potential lunatic as well as a potential genius will be proportional to the number of living members of a family. For if we throw the dice a dozen times the chance of throwing the lowest number is increased with the number of throws, likewise the highest number. A family of 12 living in which 11 are mentally sound and one unsound would mean healthy progenitors, but some inborn or more likely accidental congenital malformation in the one defective. But when the same number of conceptions occur and only one or two children are born alive or survive and show no mental defect there is no certainty that one or more of those that died might not have been mentally defective, yet in the imperfect methods of taking statistics now in vogue such stocks would be accounted free from degeneracy.

There are certain family diseases or defects which afford an excellent means of studying human heredity, because there can be no possible doubt as to their existence or not in the members of a family. The personal bias of the observer does not come in, and in collecting statistics of insanity this personal bias or negligence, as I shall show you in published statistics, is a matter of the most supreme importance. Such diseases and defects are Daltonism, hæmophilia, albinism, polydactylism, Friedreich's disease, idiopathic muscular atrophies, keratosis, &c. They show that certain physical conditions and defects are transmitted through successive generations but sometimes skip one or two generations; some of them proceed through the females who are unaffected to the males and occasionally the converse, thus illustrating morbid prepotency in one or other of the germ cells, usually the female. This also shows the necessity of considering the inborn characters of maternal and paternal grandparents.

Some families show an innate tendency to suicide but probably besides the lack of moral control inborn in their natures there is the effect of *suggestion*, a factor of no mean importance in the production of insanity. We have every reason to believe then that mental defects may be transmitted in a similar manner, although in the majority of instances what occurs is a tendency to mental instability in the form of psychoses or a paroxysmal neurosis, such as epilepsy. Fortunately there is always a tendency for a stock to revert to the normal average or to die out. This accounts for the difficulty of tracing these defects for more than three generations, but if inborn characters are essential for the development of these variations from the normal types, whether in the form of superexcellence of physical or mental characters or the reverse, it may be asked how is it that sporadic cases arise from what are apparently normal stocks? Some may be accounted for by consanguinity and social isolation, and this probably explains the development of insanity in the families of Quakers whose lives are probably more free from vicious environment than any other section of the community. It also explains the prevalence of neuroses and psychoses among the Jews who are essentially a quick-witted race. For as intelligence is not the attribute of a class but of a stock so with insanity, and this of itself is sufficient proof that inborn characters are of greater importance than environment. Therefore, where every member of a race is more or less neurotic and social isolation as regards mixing with other races also exists, as in the case of the Jews, the liability to insanity must increase, for the chance of the unfortunate commingling of two germ plasms with similar tendencies to mental instability is greatly increased.

I think I have sufficiently indicated to you the many actual and possible difficulties in getting trustworthy statistics concerning the inborn tendencies productive of insanity. Published statistics of the London County asylums for the last ten years show such enormous variability in the same asylum in successive years and in different asylums with practically the same class of admissions in the same years, that they can only be regarded, in the majority of instances, as valueless. The reason is that the personal factor of the medical officers who have furnished the data is such a variable one that even no attempt to correct these statistics by the law of frequency of error is possible. By careful investigation a hereditary history is obtainable in from 30 to 40 per cent. of patients suffering with epilepsy and insanity. I observe that in the report of the East Sussex Asylum a hereditary history can be obtained in nearly 50 per cent. and the conclusion of Dr. F. R. P. Taylor is that heredity

plays a much more important part in the production of insanity among the rural population than in that of large cities.

This may be true, but it must be remembered that the family history can be better obtained from people who have lived for several generations in the same village where consanguinity and consequent heredity of mental defect are much more likely to have occurred than from those who have migrated to the large towns. The type of the insane patient in the London County asylums is as different on the whole from that in the country as the type of mind of the same inhabitants. This can be particularly seen by watching the physiognomies of the patients of a London County asylum compared with those of an agricultural county asylum during an entertainment. It is generally acknowledged that a history of insanity in the family is far less frequently found in general paralytics than in other forms of insanity. These and drink cases make up a considerable proportion of the admissions to the London County asylums, and it seems probable that there will always be this difference in type of lunatic between city and agricultural asylums, for there is a tendency for a continual migration of the mentally and physically capable from the land to the industrial centres, leaving the feeble-minded behind to reproduce their species. This hereditary factor in the pathology of insanity cannot be touched by any legislative measures, except by the segregation of the imbecile and the feeble-minded epileptic before adolescence, thus preventing the reproduction of their species. Fortunately nature herself provides many ways of stopping this reproduction—namely, the frequency with which these defectives are cut off in adolescence by tuberculosis and other diseases, the poisonous effects of alcohol upon them, which makes them certifiable lunatics or criminals. Frequently they are sterile and a large number of feeble-minded or morally defective women who become prostitutes in our large towns and cities are sterilised by gonorrhœal infection causing adhesive inflammation of the oviducts. Unfortunately, there is a diminution of fertility of persons of civic worth, owing partly to the spread of a luxurious standard of living, late marriages, and the frequency with which intellectual women tend to regard maternity as outside their sphere of usefulness. The most hopeful means of preventing reproduction from imperfect stocks is the wide-spread education of the public conscience towards elevating the standard of morality and well-being of the individual and the race by promoting the intermarriage of suitable stocks, as is now being so well put forward by Mr. Francis Galton in the Science of Eugenics.

Having thus briefly considered the effects of the commingling of the germinal plasm of two stocks, I pass on to the consideration of what happens to the germ cell after conjugation, that is, to the fertilised ovum.

Congenital defects.—Pre-natal physiological conditions may be abnormal and give rise to various congenital deficiencies, physical and mental. The maternal blood may be deficient in the necessary chemical substances for the building up of the nervous tissue, or various poisons, such as alcohol, syphilis, and lead, may lead to impaired nutrition of the offspring or to actual disease. Fortunately, these pathological conditions cause miscarriages, abortions, and dead children, otherwise a far larger proportion of defective children would exist. A considerable number of the feeble-minded idiots, imbeciles, and epileptics are due to congenital conditions. Syphilis offers the best example of a congenital disease. It is very doubtful, now that we know that a spirochæta is the cause of syphilis, that the doctrine of spermatic infection of the ovum can be maintained, for it would mean that the spirochæta could exist in the head of the spermatozoon, which is a physical impossibility. Therefore congenital syphilis of the offspring means maternal infection and this would quite accord with my experience. An investigation of 40 cases of juvenile general paralysis showed a history, or signs, of syphilis in 80 per cent. and in the remaining 20 per cent. it could not be excluded. There are two types of the disease: one in which the child is an imbecile and the other in which the child attains a fair or even high degree of intelligence up to puberty or adolescence, when the stress incidental to the change in the psychical activities leads to the breaking down of the nervous system and the development of a rapid progressive dementia accompanied by the same characteristic physical signs as those manifested by the adult. Now if syphilis did not sterilise or destroy the products of conception a far larger number of cases of juvenile general paralysis would arise, for I find that less than 2 per cent. of fatal cases of general paralysis are due to congenital syphilis, in ages varying from eight to 20 years. The sexes are equally affected in this juvenile form, the chances of syphilitic infection being equal; but in the adult form, as you know, males greatly preponderate, even among the pauper population (with its vast army of prostitutes), where the proportion is 4 males to 1 female. As we rise in the social scale the ratio increases until it is seldom met with in females of the upper and better classes. My experience supports the conclusion that syphilised parents coming from stocks free from hereditary neuropathic and psychopathic tendencies may produce imbecile, epileptic, and general paralytic children. I have seen examples of all three in the same family, some with marked evidences of congenital syphilis apparent, others with visceral disease, and others without any gross signs, but the subjects of arrest of development of the nervous system in the form of imbecility and epilepsy or of premature decay in the form of general paralysis. A syphilitic poison, then, may operate in the child as it does in the adult in producing both gross lesions of the nervous system and premature decay of the nervous system due to a loss of specific vital energy of the neurons, of which tabes, primary optic atrophy, and general paralysis are familiar examples. But it might be asked, if this be the case, Why is it that among uncivilised races where syphilis is extremely prevalent there are few or no cases of general paralysis or tabes? Because the stress of civilisation on the nervous system is non-existent at present and has not existed in the past in the progenitors and Krafft-Ebing rightly asserts the cause of general paralysis is "syphilisation and civilisation."

Since the emancipation of the negroes in America general paralysis has appeared among them. Recently Ford Robertson has put forward the hypothesis that a diphtheroid bacillus finds a suitable soil in those who develop general paralysis and it is the toxins produced by this organism which lead to the breaking down of the nervous system. There are many facts in the etiology of the disease which hardly warrant his assertions; for example, it is difficult to understand why general paralysis should be so much more common in men than women even if we accept his hypothesis that the soil must be prepared by syphilis, alcohol, and other factors which are assumed to be only the predisposing causes of general paralysis. That in well-established cases of general paralysis the defences of the organism may be broken down and microbial invasion readily take place is probable but there are many other organisms in the intestine and respiratory tract the toxins of which would produce effects on the nervous system. In sleeping sickness, a disease which is due to trypanosome infection, a large proportion of the cases suffer from microbial invasion of diplococci but it is not the cause, rather an epi-phenomenon which hastens the termination of the disease; and for practical purposes to get rid of general paralysis we must get rid of syphilitic infection and to get rid of sleeping sickness we must get rid of trypanosome infection. I have not time here to dwell upon some points of resemblance between syphilis and a certain trypanosome infection and between the lesions of general paralysis and sleeping sickness.

It is quite evident, therefore, that an investigation of the causes of insanity must include an inquiry as to syphilis—the most potent, the most persistent, and the most prevalent of all toxic influences. Yet we find that in the published statistics of asylums hardly any attention can have been paid to this most important matter. The recognition of the influence of syphilis as a cause of insanity, particularly progressive dementia, bears a ratio to the care which investigators have expended and the opportunity they have had of obtaining reliable information. In Scandinavian countries, where syphilis has been a notifiable disease, little or no doubt has been entertained for the past 20 years that syphilis, if not the essential, is by far the most potent factor in the production of general paralysis.

Alcoholism is another most potent cause in the production of insanity, but whether we should accept the alarming statements made as regards the influence of alcohol as a factor in the production of insanity is open to question. It is necessary to distinguish between alcoholic insanity with its definite train of physical signs and mental symptoms—that is, true alcoholic psychosis, and alcohol as an agent in the production of insanity in the potential lunatic. To be more precise, alcohol is a poison in comparatively small quantities to the epileptic, the weak-minded, and the mentally unstable. It must, however, be admitted that while it may produce

diseased stocks, at the same time it prevents the perpetuation of poor stocks. In my large experience at the London County asylums I have but once seen a case of cirrhotic liver with pronounced ascites and that was the case of the notorious Jane Cakebread, who was convicted nearly 400 times of drunkenness before she was certified as insane and incapable of taking care of herself. In my hospital experience I have seen numbers of cases of cirrhosis of the liver with ascites from continuous and heavy spirit-drinking, the mind remaining perfectly clear, and I have come to the conclusion that such individuals either must have been born with a very stable mental organisation or that the alcohol is not the direct cause of the degeneration of the nervous system in alcoholic dementia but that some auto-toxins are produced. Lead likewise produces a characteristic train of symptoms which may simulate general paralysis in many ways and yet I have been unable to find any lead in the brains of persons suffering with saturnine encephalopathy. These poisons may in some way alter the metabolism of the body in certain individuals so that organic toxins are produced; or the quality of the blood may be so modified or the vessels so damaged that the nutrition of the nervous system suffers. Perhaps the most definite knowledge we have of the influence of organic chemical substances upon the nutrition and metabolism of the nervous system is afforded by consideration of the functions of the thyroid gland; an absence of iodo-thyrine is presumably the cause of the idiocy of myxœdematous cretinism, a form of idiocy with arrest of development of the brain; and the slowness of speech, thought, and action of the cachexia strumipriva of adults, which is entirely cured by administration of thyroid extract, is a proof of the necessity of this substance in nervous metabolism.

Other post-natal pathological conditions which act as causes in the production of insanity are the circulation in the blood of the toxins of all the infectious diseases. Many neuroses and psychoses date their origin from such an infection, but it is doubtful whether the poisons alone can produce more than a temporary delirium if there were not an innate tendency to mental instability. Likewise, when we speak of child-bearing and the climacteric period, the stress of puberty and adolescence as causes of insanity, we are assigning to essential physiological conditions a causal relationship when really they are only co-efficients. Mental stress is a co-efficient and sometimes a factor in the production of insanity, but mental occupation ever so hard, if not accompanied by worry, anxiety, and sleeplessness, with its attendant train of evils and resort to drugs and stimulants of all kinds, is less likely to be a cause than a preventive. For the idle mind is liable to self-introspection, selfish egoism, morbid apprehension, and hypochondriasis. I am not sure, however, that there is not an over-education of young children while the brain is developing and that there is not an attempt to develop the faculties of abstract thought and reasoning out of proportion to the education of the senses, which are the avenues of intelligence. Moreover, much might be done to educate the inborn faculties of children by a more careful study of their characters and mental traits, especially when they are spontaneous and natural, as at play.

The widespread tendency among the population of cities and large towns to hysteria and neurasthenia is the result of a complexus of factors in the struggle for existence, but it is not so much the exercise of the physiological action, even if continuous, of quick-witted brains, with the resulting multitudinous flow of ideas, as the abnormal and unphysiological conditions appertaining to the indulgencies in the evils common to city life especially. I am of opinion that Dejerine is right in asserting that healthy stocks by becoming neurasthenic furnish without ceasing new neuropathic stocks. Neurasthenia, syphilis, and alcoholic intemperance combined may be the forerunners of tabes and general paralysis.

PART II.—MORBID ANATOMY.

What can be learned by the post-mortem inspection, naked-eye and microscopic, of the organs and tissues of the body, particularly of the brain, as regards the pathological causation of insanity? We find that the insane die from the same diseases as the sane. They are, however, more prone to die from certain diseases, and I find that from 40 to 50 per cent. who have died at Claybury and Colney Hatch Asylums (types of the new and old asylums) had tuberculous lesions. 20 per cent. at least showed signs of active tuberculosis. The great majority of these I judged did not acquire the disease in the asylum, although in a considerable number it may have lighted up again there. Certain types of insanity are particularly prone to tuberculosis, the idiot, the imbecile, the epileptic dement, the melancholic, and the primary dement of adolescence in particular. It seems to be nature's mode of getting rid of a degenerate stock and I would rather believe that the low specific vitality, failing metabolism, and the shallow breathing and bodily inertia of these patients afford a suitable soil for the growth of the tuberculous bacilli than that the tuberculosis was a causal factor in the production of tuberculous insanity. Your president, Dr. A. Newsholme, who has done admirable practical work in the prevention of the spread of tuberculosis, has supported my view that the segregation of such individuals has been an efficient means of removing foci of infection from the homes of the poor. The alcoholic dement is also especially prone to tuberculosis, whereas the male general paralytic is not so; but I have found amongst the latter that emphysema and atheroma of the aorta (particularly the fibrous nodular variety) are usually present. Although tuberculosis is so common I have not once met with a case of tuberculous meningitis. Hypertrophic cirrhosis of the liver and large fibro-fatty liver are not at all uncommon, but I have only met with one instance (previously alluded to) of hob-nailed liver with pronounced ascites.

Among the senile dements cerebral hæmorrhage is not common, but softening (often multiple) caused by disease of the cerebral vessels is frequent. A considerable number of cases of arterio-sclerosis with or without softening are met with. There is a moderate amount of various forms of renal disease, but in my opinion this is not so common as in hospital practice. About 1·5 to 2 per cent. of the cases that die have cerebral tumour, and an analysis of 100 cases shows that the tumour acts as an exciting cause in the production of insane symptoms, and apart from the stupor incidental to great excess of intracranial pressure there is no relation between the signs of mental disease and the location of the tumour. The hearing of voices, one of the most common symptoms of insanity, may occur no matter where the seat of the tumour, delusions also, likewise visual hallucinations. About half the cases of tumour are syphilitic gummata; tuberculous tumours are rare; gliomata, sarcomata, and endotheliomata or fibro-endotheliomata making up the bulk of the remainder, although there are occasional isolated rare tumours of all sorts.

A striking fact in support of the influence of syphilis in the production of general paralysis is that 50 per cent. of the female general paralytics have signs of non-tuberculous adhesive inflammation of the oviducts, an argument suggesting that they have been exposed to venereal infection either as prostitutes or from their husbands. Again, the frequency with which one finds small fibrous ovaries and infantile uterine development in the imbecile, epileptic dement, juvenile general paralytic, and primary dement of adolescence shows, as in their susceptibility to tuberculosis, a lack of specific vital energy—and nature's means of preventing the perpetuation of poor types. This infantile development of the reproductive organs is also strikingly shown in the male juvenile general paralytics.

Hardly a case comes on the post-mortem table which does not show some lung complication, and pneumonia, particularly broncho-pneumonia, is the most frequent cause of death. In those asylums where dysentery is endemic this disease may carry off a large number of people, especially when an epidemic is started. It is not associated with any particular form of insanity but is especially fatal to those in whom disease or age has produced a low bodily vitality. One fact may be alluded to—that the action of the microbial toxin incidental to these diseases undoubtedly acts as a fulminant in producing epileptiform seizures of the general paralytic and status epilepticus in the epileptic, so that unless an examination be made seizures or status epilepticus may incorrectly be assigned as the cause of death.

But the brain is the principal organ which we have to consider. What can be learnt from its naked-eye and microscopical inspection, and how far can we explain insanity by such an investigation? It is admitted that there is a parallelism between the weight of the brain and mental capacity provided that an allowance is made for stature, weight of body, and sex. There is a parallelism between the complexity of the convolutional pattern and intelligence—that is to say, there is a parallelism between the superficial extent and depth of the grey matter of the cortex and the mind. We can see this when we compare the brain of a high-grade imbecile and the brain of a

highly intelligent individual; in the latter there are certain portions of the cerebral cortex more especially developed (Figs. 1, 2, and 3). Now if we examine microscopically the grey matter of the cortex we find that there is a general similarity of cell and fibre structure throughout but that in particular regions there are individual differences which we may assume are dependent upon differences of function. These regions are situated around the primary fissures—Rolando, the Sylvian, and the calcarine; they mark the position of the incoming sensory tracts to the seat of consciousness and the outgoing efferent tracts of the psycho-motor reflexes, and are the anatomical substratum respectively of our feelings and actions; but the neurons, which we may term afferent and efferent projection systems, are few comparatively to the infinite number of association neurons. The latter represent the higher functions of mind and although they are present in the brains of all animals they are most numerous in man.

FIG. 1.

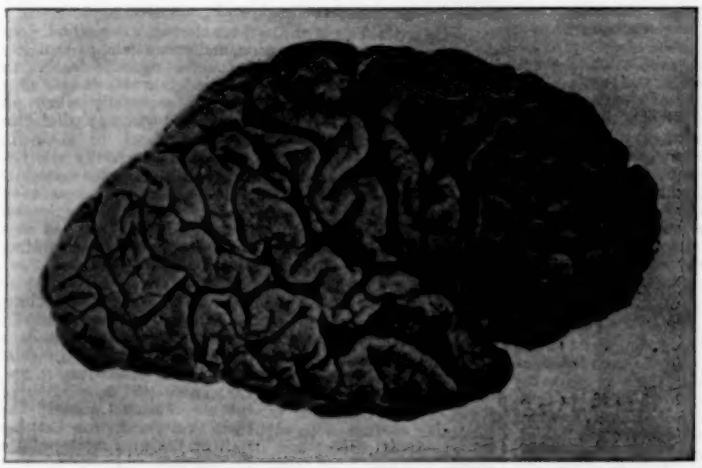
Brain of very low-type microcephalic idiot. Notice the very simple convolutional pattern, the under-development of the cerebral hemispheres, so that the greater part of the cerebellum is exposed.

FIG. 2.

Brain of a low-grade imbecile. Under-development of the cerebral hemisphere, specially of the posterior portion. Oblique direction of the Sylvian fissure. Small convolutions in simple pattern.

According to Flechsig two-thirds of the cerebral cortex is made up entirely of association centres, structures which form the anatomical basis of associative memory, by which we reason and acquire knowledge. It is evident, therefore, that an imbecile's brain is poor in this substance of mind, for the whole surface of the cortex in its expanse and its depth is very limited as compared with an intellectual human being. This poverty of the anatomical elements of mind is not merely shown by the naked-eye deficiency but also by the microscopic study of the nervous units, which are fewer in number and far less complex in structure (Fig. 4). Let me now point out to you some facts concerning the structure of the cerebral cortex. You observe in section that it consists of superimposed layers of cells which may be divided into five strata, in three of which the cells are predominant, in two the fibres. Every cell is an independent anatomical unit: it consists of a fibrillary and an interfibrillary substance, the former with a nucleus in the middle of the cell. The fibrils pass through the cell and form the essential conducting substance and the interfibrillary substance is in some way connected with the nutrition or functional activity of the neural element. Every neuron possesses a single axis-cylinder process, which, in the case of the cerebro-spinal nervous system, becomes covered with a myelin sheath; the fibrils converge to this axis-cylinder process from a variable number of branching processes of the cell called dendrons, which bring it into relation with other neurons which are functionally correlated into systems, communities, and groups. Now there are millions of these neural elements in the cerebral cortex, and in proportion to the number of branching fibrils which each of these neurons possesses there are so many points of contact. Thus we have no difficulty in supposing that in this most complex structure in nature we have a physical basis for that most complex process—the human mind. But how these nervous units act, whether it is by bio-physical or by bio-chemical processes, we do not know, although each new method of microscopic technique which has shed light on this marvellous complex anatomical structure has led to the wildest speculations and to the most sanguine hopes of fathoming the processes of thought, it has not struck these observers that they are not dealing with living matter but dead structure in which the molecular motions have ceased. It will more likely be by the study of the *simplest* reflex action in the living tissue and by analogy that we shall solve the mystery of the processes of mind, for even the highest mental operation involving volition is but the final term of a progressive evolution, of which a simple reflex is the first.

FIG. 3.

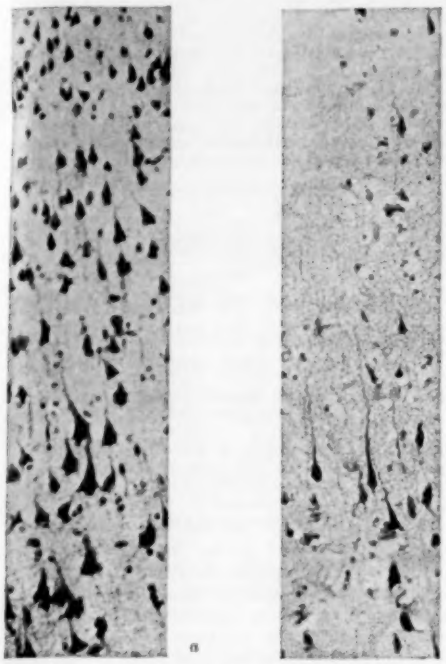


Well-convoluted brain, but considerable atrophy, especially of the fronto-central regions due to wasting of the grey matter indicative of dementia.

It will be observed that although there is a general similarity in structure of all the cells of the cortex cerebri there are also many divergencies of structure in different regions. This indicates difference of function; moreover, the work of Flechsig has shown that certain regions are prepared for function before others. This he has determined by the fact that certain systems of neurons around the primary fissures have their axis cylinders covered with an insulating myelin sheath before other parts of the cortex. He has even elaborated this work to 40 different systems of myelinogenesis which he divides into primary, intermediary, and terminal areas. There is a certain amount of truth amidst much speculation in this work. I may mention that some of the main principles of Flechsig's work were enunciated by Sir William Broadbent long ago. He based his conclusions upon separate projection and concept centres on anatomical and clinico-anatomical observations. With

regard to myelination, the work of Kaes is of considerable importance, as he has shown that there is a progressive increase of myelination of the fibres of the cerebral cortex up to the prime of life and that

FIG. 4.



a b

a, Microphotograph of the cortex of a normal brain showing the small, medium, and large-sized pyramidal cells. *b*, Microphotograph of the cortex of a case of juvenile general paralysis in which there was profound dementia. Notice the disappearance o the pyramidal cells.

after this it decreases, so that we may consider that there is some evidence of a progressive elaboration of structure with elaboration of mind, and that with the physiological decay of mind there is a progressive decay of structure. Now this condition of decay of the myelinated association fibres of the cortex is a measure of the depth of dementia in the insane individual (Fig. 5). It finds its most exaggerated expression in the progressive dementia of general paresis, and as a generalisation the structures which are the last to come in the process of progressive evolution, both embryologically and zoologically, are the first to go. This has been proved by my former assistants—Dr. J. S. Bolton in his studies on amentia and dementia and by Dr G. Watson in his researches on the lower mammals. They have shown that the pyramidal layer of cells above the layer of granules is evolutionally of later development than the layer of polymorphic cells below the layer of granules, and they conclude that the former are concerned with the higher function of associative memory and educability, whereas the latter are concerned with the more automatic, subconscious, and instinctive reflexes. In amentia it is this pyramidal layer which is especially poorly developed, and in dementia it is this same layer of cells in which decay especially is manifested.

Is there a parallelism between the degree of dementia and the wasting of the cerebral cortex? An extensive experience in correlating the symptoms manifested during life with the degree of wasting of the cortex in general paralysis leads me to believe that there is such a parallelism. Now how can we estimate the amount of wasting in a large number of instances by which we can generalise? Clearly not by microscopic investigation alone, for that would be an endless task; but by appreciation of the following facts we can come to some conclusion of the amount of wasting which the cerebral hemispheres have undergone. In an average normal brain, the pons, medulla, and cerebellum weigh about one-eighth of the whole brain. These structures do not waste to anything like the same extent as the cerebral hemispheres and being functionally related to the vegetative functions and coördination of movement, rather than the higher functions of mind, they are not arrested in development to anything like the same extent as the cerebral hemispheres in congenital deficiency of mind—amentia, or acquired deficiency of mind—dementia. Consequently, in amentia and dementia this relative proportion of 1 to 8 is usually no longer maintained. It may sink as low as 1 to 6. Now if in a patient who has died from general paralysis we have a brain which weighs, say, 1350 grammes and the pons and cerebellum together weigh 200 grammes, we may conclude, if the convolutional pattern is a complex one and there is a large quantity of fluid in the subarachnoid and subdural spaces, that the hemispheres have lost 300 grammes and we shall find in such a case that the membranes are thickened and strip in one sheet and that they lose a very considerable amount of weight owing to the escape of fluid. Often they leave erosions on the surface of the grey matter which is diminished in thickness and no longer show the white striæ of the association fibres in the cortex. Now if the convolutional pattern is a simple one and there is a large quantity of fluid and the ratio of the pons and cerebellum to the whole brain is, e.g., 1 to 6—it is probable that this was a case of an ament who had lost the little mind he possessed by an active process of decay. The size of the skull would indicate also an originally small brain. A good number of chronic lunatics are congenital

FIG. 5.

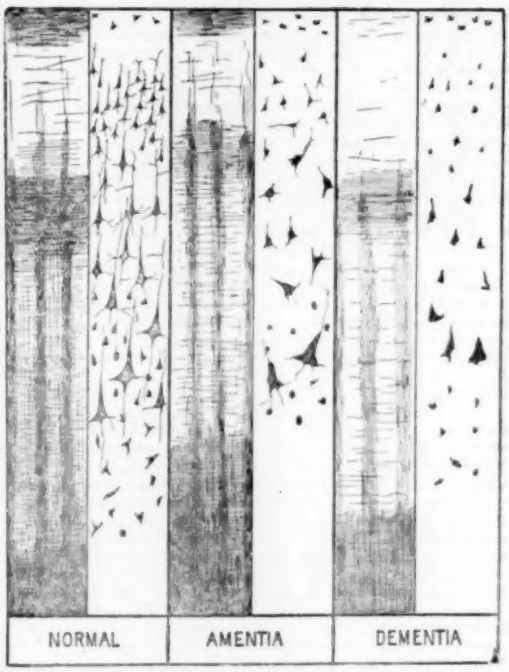


Diagram to illustrate the cell and fibre condition of the cortex in the three conditions.

aments and a process of decay may set in and cause destruction of the cortex.

We have dealt now with two conditions, amentia and dementia, and all we can find out by our present methods is a rough gauge of the deficiency of mind by the deficiency of grey matter in its superficial extent and in the simple condition of its elements and of decay of mind by the degree of destruction of the cortical grey matter and the decay of its cell and fibre elements. The microscope also reveals replacement of the cell and fibre structures by neuroglia, new vessels, and cell elements in the perivascular spaces—

namely, lymphocytes and plasma cells—which form the only characteristic microscopic evidence of a specific form of insanity—general paresis. In the true insanities where there is no dementia—for example, delusional insanity, hallucinatory insanity, and even in dementia præcox—the brain in its convolutional pattern and in the depth of the cortex generally shows nothing which would enable one to say that it was the brain of an insane person. Nor can we find microscopic evidence of any specific and characteristic change, although many may have been described by enthusiasts. Indeed, Dr. A. Campbell used six out of eight brains of patients dying from unsound mind in his very admirable studies on the histological localisation of the cerebral cortex. If such a systematic examination of every part of the cerebral cortex as he made revealed no departure from the normal it is obvious that other measures must be adopted to solve the mystery of insanity, but it is not until we have some trustworthy knowledge of the physiological processes of mind, the bio-chemical or bio-physical changes incidental to mental activity, that we can have any hope of dealing with the pathology of the question. It is easy enough to say that toxins and auto-toxins circulating in the blood produce this or that form of insanity, and we have definite evidence that certain poisons produce specific forms of delirium and hallucinations and even delusions, but this does not serve to explain insanity.

300 chemical substances have been prepared from the brain and separated by the chemist, but we do not believe that 300 chemical substances exist in the brain as collected in the test tube but probably a few only, with a large and complex molecule, of variable stability and with individual differences of synthetic combination. The impenetrable veil of the chemistry of nervous activity has only been lifted at one corner. It is probable that the complex phosphoretted molecule of the lecithins which lead to the formation of choline, glycero phosphoric acid, and the higher fatty acids, especially oleic acid, is a great exaggeration of a normal process of katabolism. But in healthy tissues there is always a proportional anabolic process. The disturbance of this normal equilibration of metabolism by toxins, deficient vascular supply, and other causes, including an innate or acquired loss of specific energy of the neurons themselves, leads to disordered metabolism and subsequently degeneration. Mental stability will depend upon chemical potential which can be transformed into nervous energy and this again must depend upon stability of metabolism. If we knew more about metabolism of the brain we might know more about the pathological causes of insanity. We know that a high oxygen tension is essential for the activity of the neural elements but we do not know that all this oxygen is used up and converted into carbon dioxide. We know that in starvation every tissue in the body may waste except the brain. How and why is it protected? Is it that there is a chemical associative memory of all the tissues of the body by which those of lowlier function have come to recognise in the long procession of the ages their dependence upon the controlling functions of the brain, so that they sacrifice themselves in order to preserve the mind (the directing influence of their activities) from destruction? It may, however, be argued that the brain does not waste because the metabolic processes occurring in it, although of a very complex and special nature, are yet infinitely small as compared with other tissues. Neurasthenic states may be due to the instability or lack of some chemical substance lying between the synapses of all the neurons and epilepsy and all paroxysmal psychoses may be due to a tendency of this substance to fulminate under the influence of excitation. This substance the psychologist McDougall has postulated to explain the process of attention and he has unfortunately termed it *neurin*. There is some histological evidence that there is such a substance lying between all the points of contact of the neurons; it is conceivable that it stores up oxygen and constitutes neural potential. It is possible upon this theory that when a stimulus passes along the fibrils of one neuron it excites the next by exploding the substance lying at the synapsis of the next neuron and so on along the chain of neural elements constituting the path of a physiological function, or, in other words, that chemical energy is transformed into molecular motion. This is mere speculation, but we want ideas and men competent to carry out researches to test such ideas. Unfortunately, physiologists can know but little of the organic chemistry of the brain unless they have devoted years to its study, and chemists seldom know much of physiology. Dr. Paton, of the Johns Hopkins University, in his admirable work on psychiatry calls attention to the necessity of the establishment of a fully equipped and well-organised psychiatrical clinic under the control of a university. We want such an institution in London, with a mental hospital attached and a central bureau for the investigation of the relation of heredity to insanity and of the social, industrial, and educational conditions which may be related to the production of insanity. Attached thereto a pathological laboratory for the study of the chemistry and histology of the brain in health and disease and its normal and morbid states by psycho-physical and other methods of research. Such exists in Munich, where Kräpelin has attracted a large number of men from all parts of the world and instituted new ideas and new methods, and, above all, aroused enthusiasm for the study of this most complex, difficult, and yet vital problem of the race.

Three Lectures
ON
THE PRESERVATION OF HEALTH AMONGST THE PERSONNEL OF THE JAPANESE NAVY AND ARMY.

Delivered at St. Thomas's Hospital, London, on May 7th, 9th, and 11th, 1906,

BY BARON TAKAKI, F.R.C.S. ENG., D.C.L.,
LATE DIRECTOR-GENERAL OF THE MEDICAL DEPARTMENT OF THE IMPERIAL JAPANESE NAVY.

LECTURE III.[1]

Delivered on May 11th.

MILITARY SANITATION.

MR. TREASURER AND GENTLEMEN,—On the subject of army sanitation I am afraid I cannot quite claim the same knowledge and speak with the same authority as in the case of the navy owing to the fact that my duty was chiefly concerned with the navy. As to practical experience, I can claim only very little which I acquired during my short stay in Manchuria. But your army had a most capable man at the front as your military attaché and Lieutenant-Colonel W. G. Macpherson, R.A.M.C., the late British medical attaché to the Japanese army, has already described and published articles concerning our medical organisation for the preservation of the health of the army under the title of "The Medical Organisation of the Japanese Army" in the *Journal of the Royal Army Medical Corps* for March, 1906. If any of you are interested in the subject of our medical organisation I strongly recommend you to read his clear and excellent article in that journal. The facts are very clearly and correctly described and I think that you may rely on them without fear. The time at my disposal being short I

TABLE XIII.—*Showing the Number of Cases of Beri-beri per 1000 Men.*

Name of division, &c.	Year. 1883.	1884.	1885.	1903.
Imperial Guards &c.	489·53	486·56	269 82	
Gendarmes	408·17	354·54	254 96	
Academy, &c....	607·70	725·00	412·12	
School of Sergeants, &c.	217·82	412·89	349 81	
Tokio Division	349·38	467·99	311·16	14 63
Sendai	120·16	216·02	138·36	
Nagoya	119·55	100·24	94·58	
Osaka...	308·31	232·90	7 07	
Hiroshima	144·82	2·65	3·08	
Kumamoto	102·95	154·75	39·17	

[1] Lectures I. and II. were published in THE LANCET of May 19th (p. 1369) and 26th (p. 1451), 1906, respectively.

will omit the subject of our medical organisation and will proceed to explain various figures which I obtained from our military authority in Tokio showing the results of our efforts in the preservation of the health of the army. The struggle against beri-beri which has been going on in the navy has also been taking place in the army and the percentage of beri-beri cases was a good indication of the general health of the army because whenever beri-beri cases diminished the health of the army also improved generally—that is to say, cases of other diseases decreased proportionally.

MILITARY HYGIENE.

The health of our army has been gradually improving in late years but beri-beri is not yet eradicated as it is in the navy and I regret to state that although the cases are few in time of peace at home the disease is apt to break out in time of war just at the time when stronger men are needed. In former years beri-beri prevailed largely in the army as it did in the navy, but now it occurs less frequently than before. Table XIII. explains the facts.

This table shows that the disease was violent in its attacks. The different sections of the army suffered differently as to numbers, so that the hospitals provided for certain divisions were inadequate to take all the cases of beri-beri; therefore, in order to meet such emergencies other accommodations were provided in the special localities to which patients could be sent, such change of air being considered beneficial and curative. In the Nagoya division

TABLE XIV.—GIVING THE NUMBER OF CASUALTIES IN THE WAR BETWEEN JAPAN AND RUSSIA, 1904–05.

Killed.		Wounded.		Missing.		Total casualties.		Total.
Officers.	Non-commissioned officers and men.	Officers.	Non-commissioned officers and men.	Officers.	Non-commissioned officers and men.	Officers.	Non-commissioned officers and men.	
1657	41,562	5307	148,396	53	5028	7017	194,956	201,973

TABLE XV.—GIVING THE NUMBER OF PATIENTS ADMITTED INTO THE FIELD HOSPITALS FROM THE BEGINNING OF THE WAR TILL AUGUST 31ST, 1905.

Wounded.			Accidents.			Infectious or contagious diseases.			General diseases.			Total.		
New cases.	Recovered.	Died.	New cases.	Recovered.	Died.	New cases.	Recovered.	Died.	New cases.	Recovered.	Died.	New cases.	Recovered.	Died.
146,813	15,018	8304	16,456	4147	237	17,866	2044	5961	203,270	23,063	6850	384,405	44,272	21,352

This table may have to be corrected later.

TABLE XVI.—SHOWING THE FINAL DISPOSAL OF THE PATIENTS EVACUATED TO JAPAN.

Classification.	Officers.			Warrant officers.			Non-commissioned officers and men.			Non-combatants.			Total.
	Wounded.	Infectious or contagious diseases.	Miscellaneous.	Wounded.	Infectious or contagious diseases.	Miscellaneous.	Wounded.	Infectious or contagious diseases.	Miscellaneous.	Wounded.	Infectious or contagious diseases.	Miscellaneous.	
Recovered	1097	—	930	287	1	227	50,690	460	73,327	64	50	10,477	—
Invalided ..	3	—	10	2	—	1	11,355	—	4,113	—	—	—	—
Died	26	1	18	3	—	3	935	311	2,125	1	40	138	—
Miscellaneous ...	1089	9	801	346	3	167	36,941	1095	57,207	51	133	1,072	—
Remaining	137	1	178	27	—	51	9,604	42	14,790	3	10	1,095	—
Total ...	2352	11	1937	665	4	449	109,525	1908	151,562	119	233	12,782	281,547

TABLE XVII.—SHOWING THE NUMBER OF INFECTIOUS CASES AND OF BERI BERI PATIENTS FROM THE BEGINNING OF THE WAR IN 1904 TO THE LAST DAY OF AUGUST, 1905.

Small-pox.		Scarlet fever.		Typhus fever.		Diphtheria.		Typhoid fever		Dysentery.		Beri-beri.	
New cases.	Deaths.	New cases.	Deaths.	New cases.	Deaths.	New cases.	Deaths.	New cases.	Deaths.	New cases.	Deaths.	New cases.	Deaths.
347	33	10	2	51	11	9	1	9722	4073	7642	1804	97,572	3956

This table may have to be corrected later.

TABLE XVIII.—COMPARATIVE TABLE OF INFECTIOUS DISEASES PER 1000 MEN.

—	Cholera.		Typhoid fever.		Dysentery.		Malaria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Chino-Japanese war	82·77	50·86	37·14	10·98	108·96	15·72	102·58	5·29
North China trouble	—	—	36·42	12·14	108·71	33·65	95·61	2·20
Russo-Japanese war	—	—	9·26	5·16	10·52	2·68	1·96	0·07

the number of beri-beri cases greatly diminished in 1885. This result is considered to have been due to a supply of rice with barley, in the proportion of 7 to 3. The Hiroshima division has suffered very little in general. The price of food is less there than at other places, so that better and more nutritious food could be supplied at the same expense, and therefore the division was supplied with some bread in place of rice. The results of the experimental use of barley in the Osaka division, and navy, induced the army authorities of other divisions to adopt a supply of barley in the proportion of 3 of barley to 7 of rice, and the result in 1903, as shown by this table, was a decrease of beri-beri.

Unfortunately, during the Chino-Japanese and the beginning of the Russo-Japanese wars owing to circumstances only rice was given to the men as principal food and as a consequence cases of beri-beri increased greatly—in fact, there was a very much larger number of cases than usual. But in the later period of the Russo-Japanese war when we began to give the men barley with rice and increased the quantity of meat the cases of beri-beri decreased rapidly with this change in diet. Another illustration of the influence of diet upon the health of the men is shown by the fact that there was not one case of beri-beri among the sailors of the naval brigade during the siege of Port Arthur, although there was a large number of beri-beri cases in the army. These men lived among the soldiers and under exactly the same conditions, but they differed from the soldiers in one respect, that they were supplied with one pound of meat, ten ounces of barley, and 20 ounces of rice per day, while the soldiers were supplied with five ounces of meat and 30 ounces of rice per day. The above examples confirm my view that beri-beri largely occurs among men who are fed with an insufficient quantity of nitrogenous food and an excess of carbohydrates.

The accompanying tables show the state of our army's health during the recent war.

Warrant officers are included under "officers." Table XIV. was made from the reports received to June 30th, 1905, concerning troops in Manchuria, and to the end of August, 1905, concerning troops in Korea and Saghalin. The proportion of officers killed to officers wounded is 1 to 3·25 and that of non-commissioned officers and men as 1 to 3·56. The table shows that the officers killed were in a larger proportion than the non commissioned officers and men. The proportion of deaths from wounds, including both killed and subsequent deaths, is 1 to 3·94.

In Table XV. the proportion of deaths from infectious and general diseases (the total number 12,811) to that of deaths from wounds is 1 to 4.

Table XVI. is compiled from the reports received from the beginning of the war to the end of August, 1905. The "miscellaneous" include those cases sent to their own homes and discharged from hospital for other causes. The figures may have to be corrected later. The total number of patients evacuated is 281,547. The proportion of the wounded to cases of infectious and general diseases and accidents is 100 to 150.

Table XVII. is compiled from the reports received from the beginning of the war to the last day of August, 1905, and may have to be corrected later. Table XVIII. is of great interest in showing the progress that has been made in our army in the preservation of health since the Chino-Japanese war. Comparing the result of the Chino-Japanese war with that of the recent war against Russia we find the following facts. 1. That cholera has practically disappeared. 2. That typhoid fever cases decreased from 37·14 per 1000 men to 9·26 per 1000. The death-rate therefrom is almost halved. 3. That dysentery cases decreased from 108·96 per 1000 of men to 10·52 per 1000. The death-rate was brought down from 15·72 per 1000 of men to 2·68 per 1000. 4. That malaria cases decreased from 102·58 per 1000 of men to 1·96 per 1000. The death-rate is practically *nil*. These remarkably good results were chiefly the results of the progress made in the medical organisation as regards food, drink, clothing, camping-ground, &c., and we took particularly great pains to exterminate flies and to prevent them from coming in contact with our bodies, the articles of daily use, and into the dwelling-houses. Muslin nets were used at the windows and doors of the houses in order to prevent flies from coming in, and also to protect the exposed part of the body, such as the face, when flies are in abundance. This extensive use of muslin nets against flies, and at the same time against mosquitoes, may possibly be responsible, besides the improved sanitary organisation, for the remarkable decrease in the number of cases of typhoid fever, dysentery, and malaria. I may mention that another prophylactic, which we did not employ previously, was the use of creosote pills. Each man in health was supposed to take one of these daily throughout the campaign, and this, too, may have had some influence in causing these improved health conditions.

TABLE XIX.—*Giving the Number of the Medical Officers of the Japanese Army on Nov. 10th, 1905.*

Rank.	Active.	Reserve.	Retired.	Total.
Surgeon-Lieutenant-General..	1	3	—	4
Surgeon-Major-General	7	2	2	11
Surgeon-Colonel	37	5	3	45
Surgeon-Lieutenant-Colonel..	43	6	5	54
Surgeon-Major	176	29	19	224
Surgeon-Captain	443	73	74	590
Surgeon-Lieutenant	232	866	110	1208
Surgeon-Second-Lieutenant...	134	2076	6	2316
Probational Surgeons	38	—	—	38
Totals	1211	3065	219	4495
Pharmacists—				
First-class inspector	1	—	—	1
Second-class ,, ...	2	—	—	2
Third class ,, ...	8	4	1	13
First-class pharmacist... ...	53	7	5	65
Second-class ,, ...	30	72	9	111
Third-class ,, ...	15	428	2	446
Totals	109	511	17	637
Grand totals	1320	3576	236	5132

TABLE XX.—*Giving the Number of Killed and Wounded among the Medical Officers during the War.*

Rank.	Killed.	Wounded.
Surgeon-Colonel	1	69
Surgeon-Captain	2	
Surgeon-Lieutenant	6	
Surgeon-Second-Lieutenant	9	
Total	18	69

GENERAL REMARKS.

During the recent war we had to take the most strict precautions to keep our men free from any epidemic disease by the carrying out of various plans arranged at the beginning of the war. For instance, as to the supply of water, we had to provide a water-cart drawn by four horses and a water-boiler cart drawn by one horse, and boiled-water stations were established and a small mess tin was carried by each soldier so that he could have boiled water by boiling it in his own mess tin when the necessity of doing so arose. At the boiling-water station during the march the soldiers had to fill their own water-bottle with boiled water. During the march when they had exhausted their own water-bottle they had to get water from the water-boiler cart which always accompanied the troops when possible and necessary and the water-carts were almost always with them. When they had to get water from a stream or river they were ordered to get the drinking water from the centre of the stream so as to avoid the impurities coming from the bank of the rivers; even then the water had to be boiled before they took it. As a result of experience they found some difficulty in knowing whether water which they got during the night was pure or dirty. They could, of course, see the water but the light was not sufficient to enable them to say whether it was pure or not. We had therefore to take great care during night marches.

FOOD.

Almost all foods were sent from Japan to the front under strict superintendence of officials who ranked as officers, but, of course, whenever they could they obtained fresh food locally but took strict precautions not to get any injurious materials from the natives because there was some danger of poisonous matter being mixed with them. We therefore tried our best to give fresh food as much as possible. During the severe winter the soldiers had to keep their mess tin wrapped in a piece of flannel and carry it under the overcoat so as to prevent its freezing. They also were ordered to cook their rice each time they had to eat it, according to the circumstances, and also at times they were given biscuit in place of rice and barley. During the hottest part of the summer they added a small quantity of acetic acid to the cooked rice and barley in order to prevent decomposition. Besides a regular supply of food materials the soldiers were allowed to buy some eatables locally, according to special regulations laid down prohibiting them from buying food directly from the natives. Saké, two ounces on an average, was allowed to each as an extra under the strict superintendence of the medical officers. Sweets were allowed to those who had no inclination to drink saké.

CAMPING.

Whenever they had to go into camp, first of all a so-called camping party, consisting of the line and medical officers, was sent out so as to select a place where they could be safe both from a strategical and from a sanitary point of view, and medical officers had to inspect the source of water-supply, the condition of the houses found there, and the people living therein. When medical officers found any water which was unfit to drink they put up a notice cautioning the troops not to take it, and in cases where there was great liability for the soldiers to take it, according to circumstances, they had to place a guard over it. As to the Chinese inhabitants, they had to inspect them in order to ascertain whether they were suffering from any infectious disease or not. On finding them suffering from such they provided a special quarter to which they were sent and where they were treated by the medical officers. As to the houses which were used as quarters by the soldiers and which had been occupied by Chinese, in the first place they cleaned the house from corner to corner and disinfected the parts which they considered dangerous and also they thoroughly cleaned and disinfected as much as possible the surface of the soil round the houses as well as that outside of the camping ground. Afterwards they removed daily and destroyed all the combustible refuse by burning or else buried it. Fæcal matter was treated in the same way as is done in other countries. As to flies, we had considerable trouble with them. At the beginning we tried to kill them in various ways but they were so numerous that we were practically overwhelmed by them. Soon, however, it was discovered that they lay their eggs in manure as well as in refuse and since then we tried to burn all the manure and refuse as quickly as possible. We were thus able to diminish the number of flies.

CLOTHES.

Besides washing the clothing as often as opportunity occurred we had disinfecting apparatus with which the clothing, &c., belonging to each soldier were disinfected or sterilised whenever we thought it necessary to do so. Each apparatus had a capacity of disinfecting for 20 men at a time, and I believe we had to use more than 100 apparatuses, and I still further believe they were very useful means of preventing any epidemic disease from spreading.

SENDING THE TROOPS TO THE FRONT.

Before the troops were sent out to the field they were made to undergo strict inspection by medical officers to see whether there was suspicion of any form of epidemic disease amongst them. When such was found all were disinfected before being sent out. As to transportation of troops from the front back to Japan, all the troops had to be disinfected at quarantine stations and were then allowed to land. We are now employing three quarantine stations, the principal of which is that of Ninoshima, where they can disinfect 6000 men in the course of 24 hours. As to disinfection, the means employed there are both steam sterilisation and formalin fumigation, of which I do not think there is any necessity of description because they are the same as you have in your own quarantine stations. All the transport ships were made to undergo thorough cleaning and disinfection each time they come back to the ports and the space between decks was cleansed and disinfected with steam, &c.

As to the treatment of wounds, our army surgeons were in favour of the conservative surgery and all were treated aseptically as much as possible. In a great many cases, with the first dressings applied, they healed by the end of a week or ten days without the dressings having been changed. Major operations were avoided as much as possible in the front, but of course, after evacuation to Japan such has been done according to the nature of the wounds. Various means of treating the wounded in the front were employed according to the nature of the wounds, but, on the whole, aseptic surgery was the principal object. As to the results and terminations of all the cases treated, we are not yet in a position to inform you because such a large number of troops and medical officers were employed and consequently the reports which were made at the front had not yet arrived at the time when I obtained the notes which I have given you here. As one part of the results and terminations of treatment I give you a short account of the hospital established in Hiroshima.

The hospital of Hiroshima was established in April, 1904, and the report covers the period till Nov. 30th, 1905, during which time the hospital admitted 203,782 cases of which 162,885 were transferred to other hospitals. The average number of patients in the hospital was about 5000 and the largest number the hospital had was 10,000 cases at a time. Almost all the serious cases were kept in the hospital because they were unfit to be transferred, yet the result was so good that the ratio of deaths and invaliding is a little above 1 per cent. Almost all the wounds of the soft tissues healed within about ten days, while those with injuries to the bones have progressed favourably except those who were wounded at the siege of Port Arthur. Many men who were wounded in the head and chest have recovered from the wounds received. There were many cases of traumatic aneurysm and wounds of nerves requiring operation. The number of operations performed at the hospital amounted to more than 3500.

ABSTRACT OF

An Oration

ENTITLED

SOME CONTRIBUTIONS TO THE PATHOLOGY OF THE THYROID GLAND.[1]

BY PROFESSOR H. KOCHER,

OF BERNE.

[*Specially reported for* THE LANCET.]

PROFESSOR KOCHER, who was introduced to a full meeting of the society by Sir LAUDER BRUNTON, the President, delivered an oration on the Pathology of the Thyroid Gland which was listened to with much interest.

He said that there existed a divergence of opinion on the nature of exophthalmic goitre, many neurologists adhering firmly to the idea that it was a neurosis and was to be treated as such, because they frequently saw the first symptoms appear after severe mental shock. There was no doubt about the diagnosis of exophthalmic goitre in a severe case but there were other symptoms as important and constant as exophthalmos and goitre. He had never seen a severe case of the disease without an alteration of the thyroid gland. There was always a certain amount of swelling of the gland and as a very early symptom dilatation of the vessels was noticed, that being the case especially in regard to the arteries, together with a characteristic bruit often combined with a thrill. In the later periods of the disease and especially after treatment the vascular symptoms disappeared, leaving the swelling (much larger at this period) characterised by a uniformly diffuse increase of all parts of the gland. At that period the gland was harder than normal, whereas in the beginning the vascular dilatation made the organ feel softer. He would not accept the diagnosis of exophthalmic goitre without being able to make out the characteristic

[1] Delivered before the Medical Society of London on May 21st, 1906.

swelling of the gland with the vascular symptoms in the beginning. He affirmed that there existed clinically a specific type of goitre which presented itself in the beginning in the form of what he called vascular goitre. There was no doubt in the first period of the disease (except in very acute cases) exophthalmos might be entirely absent and only come on later. Even in those cases the medical man would be able to make out a sign which he (Professor Kocher) had seen as one of the earliest symptoms of the disease in many cases, and that was a sudden retraction of the upper lid when the patient looked steadily at the examiner or when the patient looked upwards suddenly.

In admitting that exophthalmos was frequently absent in the beginning of the disease and might be wanting for a long period it was impossible to accept any longer the term "exophthalmic goitre" because that term might be a reason for the medical practitioner overlooking the first symptoms of the disease when treatment would have most excellent effect. Besides the symptoms mentioned there were others—viz., tremor which was one of the most constant symptoms combined with nervous agitation, impossibility of keeping quiet, congestion of the lips, of the eyes and of the face, and perspiration with every effort or every emotional influence. The eyelids might be red and swollen and there might be yellow brown pigmentation round the mouth. The patient might complain also of headache, want of sleep, vomiting, diarrhœa, and extreme psychical susceptibility or depression with loss of flesh. He wished to emphasise the fact that there were a number of symptoms which enabled the medical practitioner to make his diagnosis when the most striking symptom, exophthalmos, was wanting. There was one symptom, however, which was never wanting and that was the heart trouble in the form of tachycardia. The combination of heart trouble with goitre was so constant that lately the name of goitre heart had been introduced to collect together all affections of the heart which depended upon the formation of a goitre.

Buschan had tried to show in a monograph on Basedow's disease that if surgeons got good results with their operations they were to be explained by the fact that the cases which were really benefited by excision of the goitre were not true cases of Basedow's disease—those being in reality neurotic diseases—but that they belonged to those cardiac cases where the heart was affected indirectly by a goitre which pressed mechanically on the great vessels or the cardiac nerves at the base of the neck or by pressing on the windpipe affected the heart by some degree of suffocation. It was perfectly true that cases of large goitres were seen with tachycardia and irregular heart action showing so much obstruction of the venous circulation that the eyelids swelled and a certain degree of exophthalmos was observable. These were very important cases, inasmuch as by excision of the goitre a cure was effected. Buschan proposed the name of pseudo-Basedow's disease for these cases but it was better to say that they had nothing to do whatever with exophthalmic goitre in the proper sense of the word. They afforded an excellent illustration of the fact that the combination of goitre and exophthalmos was not the essential feature of the so-called exophthalmic goitre and that it was much better therefore to renounce entirely that name and to use a more indifferent name until they had so far cleared up the etiology of the disease to enable them to use a rational designation.

Professor Kocher said that he was willing to acknowledge that there were as good reasons for giving the name of Graves's disease to true exophthalmic goitre as the name of Basedow's disease. What he meant to sum up under the names of Graves's disease and Basedow's disease included all the affections where the symptoms, especially those of goitre and heart trouble, depended directly upon the alteration of thyroid tissue and thyroid function. He had seen 70 cases of cachexia strumipriva after total or partial excision and 66 cases of spontaneous cachexia thyropriva or myxœdema, but he had never in uncomplicated cases seen any analogous affection to Basedow's disease. He therefore urged that they were in no way justified in placing true goitre heart and with it the milder and severe forms of Basedow's disease under the head of hypothyrotic affections. But what he wished to lay stress on was this, that to come to a clear judgment on the effect of treatment of Basedow's disease they must absolutely distinguish the different degrees in which the disease presented itself at the time of the examination of the patient. A patient might be seen quite in the beginning when there was not much more to be observed than a characteristic alteration of the thyroid body with some heart trouble and slight indications of the other symptoms. They might see the patient when the symptoms were mitigated and some of the most striking features, like exophthalmos, were wanting or where by the influence of former alterations of the nervous system the symptoms were particularly severe. Professor Kocher classified his cases under the following three varieties: First, vascular goitre (stroma vasculosa). That consisted of a very characteristic change of the thyroid body which swelled rather rapidly in the form of a more or less soft tumour with great dilatation of the vessels and systolic bruit and thrill. The tumour was nearly as characteristic as the swelling of the gland in any other case of Basedow's disease but the general symptoms were much less pronounced than in typical cases. Tachycardia was always present, trembling (tremor) was seen as a rule, but exophthalmos was often wanting and only some of the ocular symptoms indicated the beginning of the influence on the general system. Here the chance of medical treatment to reduce the symptoms by small doses of iodine or much better by phosphates was particularly favourable and the outlook for a radical cure by operation was excellent.

The second variety of the disease which had to be separated from typical Basedow's disease was a rather frequent form and its characteristic feature was that there existed an ordinary goitre before the development of the Basedowian changes which were, so to speak, grafted on the common form of colloid goitre. They might give it therefore the name of struma Basedowiana (Gravesiana) colloides. In all these cases the symptoms were less severe even when all of them were present. If not it was especially the exophthalmos which might be absent. Tachycardia was always present but even here the mitigation was indicated by less dilatation of the heart. There could be no doubt that they had to do with real Basedow's disease in a mitigated form because the other ocular symptoms were frequently present and so were most of the typical symptoms. Why all the symptoms existed in lesser degrees must be explained by the degenerative changes in the gland. At any rate he had seen cases where the symptoms of true Graves's disease had been greatly ameliorated on the development of an ordinary colloid goitre. That seemed to him to be an important fact.

The third and last form was the typical Basedow's disease or Graves's disease, developing frequently very rapidly, even suddenly, after mental shock and giving rise to such a change of aspect of the patient that it struck even inexperienced people at once. The exophthalmos was in that respect the most striking symptom but it was certain that at the commencement it might be absent and the diagnosis would then have to be made by the other ocular and general symptoms. If they took all his cases which were to be classed together under the head of Basedow's disease, the typical and severe cases in later periods as well as the milder forms in the beginning, they found a total of 175 operations with nine deaths—that is to say, a percentage of 5. With such statistical results at hand and considering the fact that in taking away in due time the diseased thyroid gland they were able to cure even the severest cases of Basedow's disease, they must admit that with the thyroid body they took away the source of the mischief and the organ in which the disease had its localisation. Practically the most important fact was to be able to say definitely: Graves's (Basedow's) disease meant a thyro-toxic affection in opposition to cachexia thyropriva. The question could only be open for discussion whether the functional disorder consisted rather in a perverse activity of the gland in the sense of dysthyrosis or in a simple exaggeration of the normal function—hyperthyrosis. Clinically struma Basedowiana had characteristic features in the vascular symptoms with dilatation of arteries and systolic bruit and thrill, and in the diffuse and uniform swelling of all parts of the gland with a coarse granular surface, with softer consistence in the beginning and rather harder than ordinary goitre in later stages. That was quite in accordance with the fact that by taking away the diseased thyroid body the symptoms might disappear completely. There was only one exception to that rule—viz., that in later periods when secondary changes had taken place in the fatty tissue of the orbit and in the cardiac muscle, &c., the complete re-establishment to normal conditions was hindered.

If it was asked—Why did not all cases of operation give complete success?—the answer was: they knew perfectly well which cases they could expect to cure entirely and which cases would give a more or less perfect result, because the degree of amelioration was in exact relation with the quantity of hypertrophy taken away or destroyed by the

operation—that is to say, with the amount of diminution of the function of the gland. That absolute parallelism between the degree of diminution of morbid symptoms and the quantity of thyroid tissue removed seemed to be convincing that the abnormally increased activity of the gland poured some poisonous substance into the circulation, but the question still remained open whether it was exclusively the excess of the normal secretion which exerted that poisonous influence on the nervous and especially sympathetic system, or whether it was to a certain degree an abnormal secretion that played a certain part. But in favour of the theory of pure hyperthyrosis there was the fact that the administration of extracts of the normal gland gave rise to the same symptoms as Basedowian goitre. If they gave to a cretinoid or a myxœdematous individual the quantity of thyroid extract which his body needed he would become like a normal person but if they gave him much larger doses for a long time he would go to the other extreme and show symptoms of Basedow's disease. So they might state positively that a hyperfunction of the thyroid gland through one reason or another would be quite sufficient to explain the appearance of the symptoms of Graves's disease and their disappearance by operation. Were they bound by that theory to propose the operation to every patient affected with symptoms without considering the period to which the disease had progressed? To that he answered, That because the first change in the disease undoubtedly was in the nervous system they must in these cases do everything to diminish all exhausting influences on the nervous system and above all must keep the patient perfectly quiet in every way for a long time. They might try at the same time to compensate the loss of phosphates accompanying nervous disorders by the administration of phosphates which was one of the best forms of treatment of Basedow's disease. Besides that a well-chosen diet and good food were necessary. Further, the indications were not to delay the operation till the point where it was dangerous to life.

Whilst in his last 1000 cases of excision of ordinary goitre (excluding malignant diseases) he had only lost three patients, he had lost nine in 175 operations for Basedow's disease. In all the cases which he had lost, even in advanced cases, there existed already besides the irritation of the cardiac nerves organic changes of the muscle of the heart, with more or less dilatation and irregularity of its action, and to these alterations it was to be attributed that there had been more deaths than in the ordinary cases. Therefore it was necessary not to delay the operation until these organic changes had set in. If they operated in the early stages of Basedow's disease they did not expose the life of the patient to any danger. He had not lost a single case when the operation could be performed early, even in very bad cases, but he had been very careful to secure judicious medical treatment for those patients for weeks before the operation. A judicious use of very small doses of iodine for a short time, the continuous use of phosphates, and absolute mental and bodily rest were the most important features of the preliminary medical treatment.

PRIMARY MALIGNANT DISEASE OF THE VERMIFORM APPENDIX.[1]

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AND

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WE have been able to collect 62 supposed examples of primary malignant disease of the vermiform appendix, including one, hitherto unpublished, under the care of Mr. H. S. Pendlebury at St. George's Hospital. After carefully examining the reports on these cases and excluding those not confirmed by the microscope and those which may have been primary in the cæcum, the number is reduced to 42, of which the diagnosis was carcinoma in 37 cases, endothelioma in three, and sarcoma in two. In most of these the condition was found during an operation, but nine examples were discovered at necropsies or as the result of a routine examination of the appendix afterwards.

The condition is certainly a rare one but probably hardly so rare as has hitherto been supposed, for the growths may well have been overlooked owing to their slight malignancy and owing to their frequent association as minute growths with stenoses. Out of the total number of cases (42) 41 have been placed on record during the past ten years. Two appendices during the past five years removed at St. George's Hospital for supposed simple inflammation were found to present malignant change.

The age is given in 36 cases out of the 42 cases of primary malignant disease; the youngest[2] patients were those of Sargent and of Letulle and Weinberg, aged 12 years, and there were others, aged 14 and 15 years; at the other extreme was a man, aged 81 years (Elting), and it is interesting to note that both in this and the next eldest, aged 63 years (A. O. J. Kelly), the growth was columnar-celled, an unusual type in the vermiform appendix. The average age is found to be 30·6, 30·3, and 39 years in the carcinomas, endotheliomas, and sarcomas respectively, or, taking all three classes together, 30·8 years. If the two oldest patients mentioned above are excluded, the average is reduced to 27·8 years. It is interesting to compare the age-incidence of primary carcinoma in other parts of the intestine. In 41 cases of primary carcinoma of the duodenum the average age was 52 years; in nine cases of primary carcinoma of the jejunum and ileum that we have collected it was 47·2 years, in 30 cases of primary carcinoma of the cæcum 47·8 years, and in 100 cases of primary carcinoma of the remainder of the large intestine 49·34 years. It therefore appears that the average age-incidence of primary carcinoma of the vermiform appendix is 17 years lower than in other parts of the intestine. Further, the age-incidence varies in the different kinds of carcinoma of the vermiform appendix, being 52 years in the columnar-celled, 32 years in the transitional forms, 24 years in the spheroidal-celled, and 25·5 years in those merely described as "carcinoma."

Associated conditions.—Only an incomplete summary of the morbid conditions found in the appendix in the published cases of primary new growth is possible, as in many cases the observer's attention has evidently been focussed on the existence of the growth to the exclusion of any other less striking or less important feature. Acute inflammation was found in 13 cases. Obliterating appendicitis was mentioned in 11 cases, in three of which the growth was described as arising at the stricture, but it is possible that the stricture in some of the other eight cases was due entirely to the growth. Catarrhal appendicitis, chronic appendicitis with ulceration, and chronic inflammation are mentioned in one case each. Adhesions were stated to be present in 15 cases. In two cases (Beger, Elting) there was a fistula of three and a half years' and six months' duration respectively. A concretion was mentioned as being present in only three cases (Letulle and Weinberg, Walsham, and Hurdon). This is a striking contrast to the frequent association of biliary calculi and primary carcinoma of the gall-bladder.

Secondary growths.—In only five of the 42 cases, or 12 per cent., were secondary growths described as being present; in three cases (Fiske-Jones and Simmonds, and A. O. J. Kelly) the abdominal lymphatic glands were involved; in two cases (A. O. J. Kelly and Elting) there were multiple growths on the peritoneum, and in Whipham's case there were growths in the liver and right ovary. In two out of the five cases the growth was a columnar-celled carcinoma.

The situation of the growth is given in 33 cases. The growth involved the whole length of the appendix in four cases, it was situated at the tip in seven, near the tip in nine, in the middle in four, at the middle and tip in one case, and near the base in eight cases. In the 33 cases here analysed at least 16, or 48 per cent., were growths localised in the distal third. The size of the growth varied from that of a pigeon's egg in Glazebrook's endothelial sarcoma to those of microscopical dimensions, as in Letulle and Weinberg's series. As a rule it was of the size of a pea to that of a marble, nearly always white in appearance and firm in texture. It may narrow or completely occlude the lumen of the appendix. (Fig. 1.)

Microscopic appearances.—Of the 42 cases of primary malignant disease of the vermiform appendix 37, or 88 per cent., were described as one form or another of carcinoma,

[1] An abstract of a paper read before the Royal Medical and Chirurgical Society on Feb. 27th, 1906.

[2] Since this paper was written Baldauf has published a report on three more patients, one of whom was aged eight years.

three as endothelioma, and two as sarcoma. Of the 37 cases of primary carcinoma 17, or 45 per cent., appear from the descriptions given to be polyhedral- or spheroidal-celled (one being colloid), six cases as transitional from the columnar-celled to the spheroidal-celled type, six columnar-celled carcinoma (1 being colloid), and eight cases are described

FIG. 1.

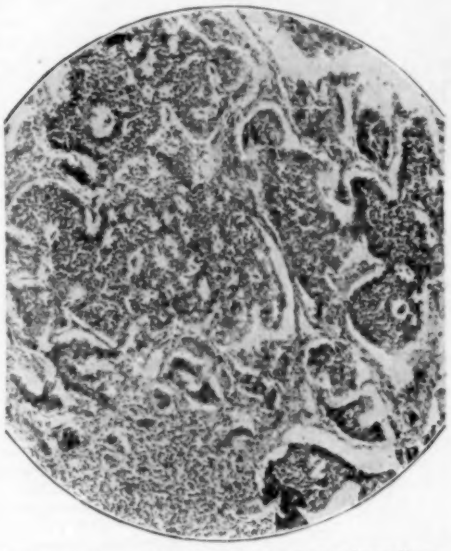
Section of primary spheroidal-celled carcinoma of the vermiform appendix showing growth filling up the lumen of the appendix and at one point infiltrating its wall. (Photomicrograph by Dr. H. R. D. Spitta.)

merely as "carcinoma." There are thus two distinct types of primary carcinoma of the vermiform appendix: (1) the columnar-celled, like that met with in the large intestine; and (2) the spheroidal-celled.

As already pointed out, the average age in the five cases of columnar-celled carcinoma of the vermiform appendix was 52 years, thus corresponding with the average age of primary carcinoma of other parts of the small and large intestines. The special character of spheroidal-celled carcinoma of the vermiform appendix is shown by its benign nature and by the early age incidence, for the average age of the 14 available cases was only 24·2 years, the extremes being 37 and 12 years. Since the average age in the six of the eight cases described merely as "carcinoma," in which the age is available, was 25·5 years, it is highly probable that many of them were examples of spheroidal-celled carcinoma. In this connexion it is interesting to note that the average age in the six cases, showing a transition from columnar- to spheroidal-celled carcinoma, was 32·7 years.

Some reference must be made to the histology of the spheroidal-celled type, as it differs so markedly from the columnar-celled carcinoma met with in the colon. The following brief description applies to two specimens that we have examined at St. George's Hospital and probably to many of the recorded spheroidal- or polyhedral-celled carcinomas. The arrangement of the growth is alveolar, the cells occupying the alveoli are round and polyhedral, small, and somewhat resembling those of rodent ulcer. There is a scanty margin of clear protoplasm around the nuclei, which stain sharply and show nucleoli. The cells are in close contact and fill the alveoli, but in some alveoli there are one or more clear spaces, apparently due to degeneration of the surrounding cells. The spaces thus produced are more often empty but may contain spindle-shaped cells like those forming the walls of the alveoli. This vacuolated appearance is a striking feature of the growth (Fig. 2). The alveolar walls are delicate and formed of spindle-shaped connective-tissue cells. It may be difficult to determine the starting-point of the tumour, but from an examination of sections from two cases at St. George's Hospital and one under Dr. E. Hurdon's care (to whom we are much indebted for a slide sent by the courtesy of Dr. C. H. Bunting) we incline to the view that it is in the mucosa, which becomes replaced by spheroidal-celled growth, and from the cells of Lieberkühn's crypts. These appearances resemble in a remarkable manner those in a group of cases recently collected

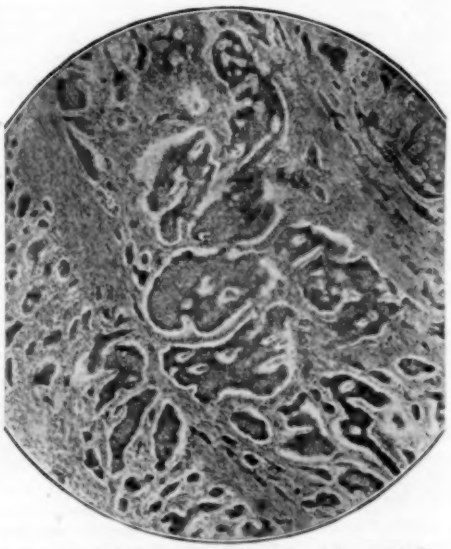
FIG. 2.



Section of primary spheroidal-celled carcinoma of vermiform appendix; shows vacuolation of the alveoli. (Photomicrograph by Dr. H. R. D. Spitta.)

by Dr. Bunting of multiple primary carcinomata of the jejunum or ileum (Fig. 3). In addition to his own case he gave the main points of five other examples (O. Lubarsch (2), Notthaft, Walter, and Oberndorfer), which all agreed in their structure and their benign character. Dr. W. B. Ransom described and figured a case which had a similar

FIG. 3.



Section of multiple primary carcinoma of ileum (C. H. Bunting: Johns Hopkins Hospital Bulletin, 1904, vol. xv., p. 309) from section kindly provided by Dr. Bunting. (Photomicrograph by Dr. H. R. D. Spitta.)

structure, but differed from the others in the presence of numerous secondary growths in the liver. In these multiple primary carcinomas of the small intestine a similar vacuolation, due to hyaline degeneration of the cells in the centre, was mentioned as giving the growth the appearance of a cylindroma, but as a connexion could be traced between the epithelial cells of the mucosa and the growth in six out of seven cases they were regarded as carcinomatous; the remaining case in which there was no manifest connexion with the intestinal epithelium was termed a "lymphatic endothelial carcinoma." The histological nature of these multiple primary growths of the ileum and jejunum is evidently the same as in those spoken of as primary spheroidal-celled carcinoma of the vermiform appendix; further, the growths in both cases are nearly always benign and in this respect, it is true, resemble some forms of endothelioma more than spheroidal-celled carcinoma. Two closely allied forms of carcinoma of the skin, however, rodent ulcer and the basal-celled growths of Krompecher, of which 15 cases of multiple growths of the scalp collected by Dubréuilh and Auchè are examples, resemble the spheroidal-celled carcinomas of the small intestine and vermiform appendix both in structure and benignancy. There is, however, an etiological difference between the multiple primary carcinoma of the ileum and the primary spheroidal-celled carcinoma of the appendix in the age-incidence, averaging 46·8 years in five of Bunting's cases, as compared with 24·2 years in the case of primary spheroidal-celled carcinoma of the appendix.

Clinical considerations.—From the cases available for analysis it would be useless to attempt to build up a clinical picture by which a diagnosis could be made; indeed, as far as we can find out, a correct diagnosis has never been made before operation. This is hardly surprising, since the symptoms in nearly every instance were those of appendicitis in one form or another. In those cases in which the condition was found after death the growth was the cause of death in two only. The reasons which led to the operation in the 33 patients from whom the appendix was removed during life were as follows. Four of the operations—those of Hurdon, Jessup, Elting, and Norris—were undertaken for the relief of symptoms referable to the female pelvic viscera. Beger's patient and one of Elting's underwent operation for the relief of a fistula dating from an iliac abscess that had refused to heal; in Elting's case this was thought to be due to tuberculous disease of the cæcum. In the remaining 27 the symptoms pointed to appendicitis in one form or another and may be separated into four groups: (1) symptoms of the first acute attack, 10 cases; (2) chronic symptoms with an acute attack, three cases; (3) recurrent attacks, nine cases; and (4) chronic appendicitis, five cases. In some, then, the condition appeared to be acute and of short standing, while in others the symptoms had extended over many years, in one case 12 years.

The growth, it appears, may be either the cause or the effect of the changes producing the symptoms, and may give rise to the symptoms of appendicitis; it is probably the cause in those cases with an apparently acute onset, or in which, the symptoms having been chronic, the growth is the main feature of the appendix. It is probably the outcome of chronic irritation in those cases of obliterating appendicitis in which the growth is recognised by the microscope only.

The extent of the operation called for by the diseased appendix but rarely exceeded the simple removal of the appendix. In three of the operations a portion of the cæcum surrounding the base of the appendix was excised with the latter organ (Fiske-Jones and Simmonds, Paterson, Kelly and Hurdon). In one case (Fiske-Jones and Simmonds) it was necessary to remove some glands in the mesentery. Beger operated for the relief of a persistent iliac fistula. Elting, operating for a similar condition, was forced to remove the cæcum and part of the colon and ileum owing to the wide spread of the disease, and the sarcoma in Warren's case was so extensive as to require a similar operation.

The results, immediate and remote, of the operation, have been surprisingly good. There were four deaths within two weeks of the operation. Beger's patient, who had had a fistula in the iliac region for three and a half years, did not survive the attempt to relieve the condition. In one case of Elting, also with a fistula, in which the operation consisted in the removal of a large amount of intestine, the patient died two weeks later; one case (A. O. J. Kelly), a man of 63 years, in whom the growth had formed secondary metastases, also died; and the fourth patient was Paterson's, where it was necessary to remove part of the cæcum. In the majority of the other cases recovery is definitely stated to have occurred. Of the 29 patients who made recoveries one died four months later (Harte and Willson) after an operation to relieve obstruction caused by a band in the right iliac fossa, but post mortem no recurrence of the growth was found. None of the other patients—and some have been heard of years after the operation—can be found to present any suggestion of recurrence. A patient whose case was recorded by one of us was at the time of the original report suffering from symptoms compatible with the view that a recurrence had occurred, and this case is mentioned by Howard Kelly and Hurdon in their monograph on "Diseases of the Vermiform Appendix" as the only one in which recurrence was thought to have occurred. We are indebted to Mr. H. M. Ramsay for the information that the patient was in perfect health in July, 1905. To Dr. Spitta our sincere thanks are due for the photomicrographs illustrating this paper.

Bibliography.—Baldauf: Albany Medical Annals, December, 1905. Battle: THE LANCET, July 29th, 1905, p. 291. Beger: Berliner Klinische Wochenschrift, 1882, Band xix., p. 616. Bierhoff: Deutsches Archiv für Klinische Medicin, 1880, Band xxvii. Bunting: Johns Hopkins Hospital Bulletin, 1904, vol. xv., p. 389. Burnam: Johns Hopkins Hospital Bulletin, 1904, vol. xv., p. 136. Draper: Boston Medical and Surgical Journal, 1824, vol. xv., p. 131. Dubréuilh and Auchè: Annales de Dermatologie et de Syphiligraphie, Paris, 1902, Série IV., tome iii., p. 545 (quoted by Bunting). Elting: Annals of Surgery, 1903, vol. xxxvii., p. 549. Fiske-Jones and Simmonds: Boston Medical and Surgical Journal, 1904, vol. cli., p. 586. Gilford: THE LANCET, July 29th, 1893, p. 241. Giscard: Toulouse. Imp. St. Cyprien, 1900, 380, p. 51 (quoted by Elting). Glazebrook: Virginian Medical Monthly, vol. xxii., p. 221 (quoted by Elting). Goffe: New York Medical Record, 1901, vol. lx., p. 14. Harte and Willson: Transactions of the American Surgical Association, 1902, vol. xx., p. 223. Hurdon: Johns Hopkins Hospital Bulletin, 1900, vol. xi., p. 175. Jessup: New York Medical Record, 1902, vol. lxii., p. 289. Kelly (A. O. J.): Universal Medical Magazine, 1900; Proceedings of the Pathological Society of Philadelphia, 1900, p. 109. Kelly (H.) and Hurdon: Diseases of the Vermiform Appendix, 1905. Kolaczek: Archiv für Klinische Chirurgie, 1875, p. 366. Krompecher: Quoted by Bunting. Latham: Transactions of the Pathological Society of London, 1897, vol. xlviii., p. 86. Leichenstein: Von Ziemssen's Cyclopædia of the Practice of Medicine, English edition, 1877, vol. vii., p. 636. Letulle et Weinberg: Bulletin de la Société Anatomique, 1897, Série V., vol. xi., p. 747; 1900, Série VI., vol. ii., p. 374. Lockwood: Appendicitis, its Pathology and Surgery, 1901, p. 7. Lockwood and Kanthack: Brit. Med. Jour., 1895, vol. i., p. 756. Lubarsch: Virchow's Archiv, 1888, Band cxi., S. 316. McBurney: New York Medical Record, 1901, vol. lx., p. 478. Maydl: Ueber die Darmkrebs, Wien, 1883. Merling: Journal de l'Expérience, 1838 (quoted by Elting). Monks: Boston Medical and Surgical Journal, 1899, vol. cxl., p. 210. Moschowitz: Annals of Surgery, 1903, vol. xxxvii., p. 891. Mossé et Daunic: Bulletin de la Société Anatomique, 1897, Série V., vol. xi., p. 814. Norris: Medical Bulletin of the University of Pennsylvania, 1903, p. 334. Nothnagel: Specielle Pathologie und Therapie, 1898, vol. xvii., p. 651. Paterson: Practitioner, 1903, vol. lxx., p. 515. Prus: In Cronzel's Thèse, Paris (quoted by Elting). Ransom: THE LANCET, Nov. 15th, 1890, p. 1020. Rokitansky: Medicinische Jahrbücher, 1867, Band xiii., p. 179. Rolleston: THE LANCET, July 7th, 1900, p. 11; Primary Carcinoma of the Duodenum, THE LANCET, April 20th, 1901, p. 1121. Rolleston and Sheild: Transactions of the Clinical Society of London, 1897, vol. xxx., p. 90. Ruyter: Archiv für Klinische Chirurgie, vol. lxv., p. 376. St. Bartholomew's Hospital Reports, vol. xxxix., Registrar's Report, 1903, p. 183 (Walsham's case). Sargent: THE LANCET, Sept. 23rd, 1905, p. 889. Stimson: Annals of Surgery, vol. xxiii., p. 221 (quoted by Elting). Warren: Boston Medical and Surgical Journal, 1898, vol. cxxxviii., p. 177. Weir: New York Medical Record, May 25th, 1903; Transactions of the American Surgical Association, 1902, vol. xx., p. 259. Whipham: THE LANCET, Feb. 2nd, 1901, p. 320. Wright: Boston Medical and Surgical Journal, 1898, vol. cxxxviii., p. 150. Ziemann: Bibliothek der Medicinischen Wissenschaften.

ON THE X RAY DIAGNOSIS OF KIDNEY STONES.[1]

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IN January, 1904, I read a short note to you on the very interesting subject of the x ray diagnosis of kidney stones. This note was based on a series of 25 cases, in six of which the diagnosis of the presence of a stone was made and the purpose of the note was to lay stress on the value of this method of diagnosis in suspected cases of renal calculus, not only from the positive point of view

[1] A paper read before the Liverpool Medical Institution on Feb. 2nd 1906.

but also from the negative. At that time there were two methods of taking these radiographs successfully: (1) the one put forward by Leonard of Philadelphia, in which the patient was allowed to breathe during the time the radiograph was taken; and (2) the other advocated in the first place by Shenton, in which the exposure was made whilst the breath was held. Since then a newer method of taking radiographs has been introduced. Albers Schönberg of Hamburg has brought out his "compressor tube apparatus," and it is not too much to say that the use of this apparatus, or one of the many others working on the same principle, has revolutionised x ray work, inasmuch as by its use it is possible to obtain penetration and definition in practically all cases, whereas before the best results were only occasional, and in no class of radiographic work has the systematic use of this apparatus been of such service as in the examination of the kidney regions.

Most of the instruments supplied by the makers are very elaborate and costly but in its simplest form, as we use it at the Royal Infirmary, it is quite efficient and quite cheap. This, which I now show to you, was made for me by Messrs. Watson and Sons of London who modified their original design at my suggestion. As you see, it consists of a metal tube attached by a joint to an arm which can be fixed if so desired to the stand which supports the x ray tube; to the upper surface of this tube is attached a metal shield with an opening for the insertion of different sized diaphragms; the lower half of the tube is detachable and the upper part is so made that any size or shape of lower half can be rapidly fitted. For kidney examination I have had made specially curved lower portions so that the long side can be pressed well down into the abdomen whilst the short part fits over the lower ribs. Thus we can get plenty of pressure without the necessity of either tilting the tube or of causing the patient unnecessary pain and discomfort and the long side by its pressure into the abdomen helps to control the respiratory movements of the side under examination and so to fix the kidney. This latter is a most important point, as it was the up-and-down movement of the kidney with respiration which made the diagnosis uncertain when long exposures were given and which necessitated for success that the exposure should be made during the time the breath could be held, and as this rarely exceeds 30 seconds it was not always possible to obtain satisfactory penetration of the abdomen. The one obvious drawback is that to examine the whole stone area necessitates the use of five plates and five exposures, one upper and one lower abdominal on each side and one pelvic for the lower ends of the ureters. As, however, exposures very rarely have to be more than two minutes, and are often only from 60 to 90 seconds, this drawback is not so great as at first sight might appear to be the case.

In addition to a pressure tube the apparatus used for the cases which will illustrate this paper consists of a ten-inch coil, fitted with a mercury interruptor of the Mackenzie-Davidson type, worked with a current of from 24 to 30 volts and six to ten ampères, and the x ray tube, as a rule, one of Müller's regulating tubes with a fairly large bulb. The patient lies on a level table with the knees and shoulders so raised that the back lies flat and is not arched. As a rule all clothing is removed from the area to be exposed but occasionally, more especially with women, one undergarment has been left on, and if this is done it is very necessary to see that all buttons, pins, or such like opaque articles are removed.

With regard to the preparation of the patient probably it is better to have the bowels well cleared out. There are two reasons for this—one, that such a course tends to lessen the x ray density of the abdomen; another, that it is possible that masses of fæces might cast shadows suggestive of the presence of stone. However, it is not a very important point, especially in hospital patients, who can easily be re-examined if necessary. Bisecting the line between the ensiform process and the umbilicus the pressure tube is adjusted so that its centre is on a level with this spot, whilst it slightly overlaps the middline of the body and the long side is pressed well down into the abdomen with as much pressure as the patient can stand. The x ray tube is swung over and the first exposure is made. The second area taken is the lower part of the abdomen and it slightly overlaps the upper. The same is done on the other side and then one exposure is made centrally over the pelvic region. These five areas overlap one another and cover the whole of both kidneys and the full extent of the ureters. This is, very shortly, the method I strongly advocate for making the x ray diagnosis of kidney stones and I would urge that, properly carried out, in the large majority of cases one can secure resulting plates which warrant one in giving a very definite either positive or negative diagnosis.

In dealing with the subject proper of this paper I shall endeavour to arrange the material under the three headings of Positive, Doubtful, and Negative Diagnosis, but it is impossible to draw sharp and distinct lines between these and so the divisions must necessarily overlap one another in some measure.

Taking the "positive diagnosis" first, let us consider what are the symptoms suggesting the presence of stone for which patients are usually referred for x ray examination, and I will also illustrate this division of my subject with short notes of cases showing the great value of making the positive diagnosis. I presume that the three cardinal symptoms are pain, attacks of renal colic, and hæmaturia, and any or all of these may be caused by other conditions than stone, and so difficult in many cases is the diagnosis that it has not infrequently happened for operations on other organs to have been performed when the symptoms were really due to kidney stone and *vice versâ*. Kidneys have been operated upon for stone and none found, and indeed none have been present. Leonard reports a case where an expert surgeon cut down on a kidney for stone, found none, and afterwards reported the case fully as one where the symptoms were entirely misleading. Shortly afterwards the patient was x rayed and a large stone was revealed. Mr. F. T. Paul challenged me a few years ago to x ray a patient of his who had "a stone in the kidney undoubtedly, and on whom he was going to operate whatever the x rays said." I made an x ray examination and ventured the opinion that he would find no stone; he cut down and found a typical tuberculous kidney and no stone. Yet this patient had pain, attacks of renal colic, and hæmaturia.

The radiograph I show you now depicts clearly a stone in the kidney of a girl, aged 19 years. One year ago last November she had her appendix removed; the surgeon who removed it has since informed me that except for being very long it was quite healthy. In November last Dr. T. F. Grimsdale opened the abdomen and freed adhesions; at the same time he palpated the kidney, feeling suspicious, and felt what he took to be a stone. On her recovery the x ray department finally completed the diagnosis and proved the true nature of her complaint and accounted for the pain in the back and loin, which, according to her own statement, is the only symptom she ever had. The stone weighed 20 grains.

Let me show you a few more examples of the positive diagnosis, none without their points of interest. That large stones can be present for years and yet be unsuspected is illustrated very well by the next case. Dr. J. H. Abram sent a man to the x ray department in November last, the important point being that he was not suspected of having a stone, but the examination was to be made with a view to certainly negativing such a condition. This man had complained of a somewhat indefinite pain in the right loin region but had never had renal colic, hæmaturia, or any other symptoms suggestive of stone. We showed with the rays the shadows of two stones, and on the strength of this Mr. Rushton Parker operated and removed them. They weighed respectively 146 grains and 10 grains.

Next let us take the case of a young medical man admitted to the private ward of the Royal Infirmary with septic poisoning originating in a finger wound; an abscess formed in the kidney and Mr. W. T. Thomas cut down and let out pus. The patient did not progress satisfactorily and in further cross-examination it came out that "although entirely free from pain during the past year, previously to that for a few years he had had considerable pain in the back and side which often followed on a bicycle ride"; again, there were no hæmaturia, attacks of renal colic, or other symptoms. The x ray examination showed high up on the plate the shadow of what was undoubtedly a kidney stone; also lower down in the track of the ureter another shadow. This second shadow, large and round, was puzzling and difficult to account for; it scarcely seemed possible for it to be from a stone in the ureter. At the operation the stone was found and removed from the lower part of the kidney, the ureter was traced downwards and nothing was found, but after a prolonged search Mr. Thomas discovered a large gland full of putty-like material partially calcified, and this no doubt

accounted for the shadow. Of course, we knew that calcified glands did cast shadows, but this shadow was altogether larger and more definite than is usual from such a cause. The case is one of the greatest interest and value as showing the two conditions of stone and calcified gland in the same subject and also on the same side.

That stones can be very large and yet be present unsuspected for many years is illustrated by the next case. Here a large stone weighing 135 grains was found by the x rays in the kidney of a woman who had had symptoms for 12 years. She came into the Royal Infirmary with pyonephrosis and the stone was removed by Mr. Thomas. It was only six weeks previously to this that her medical attendant began to suspect the true condition of affairs. All along there had been no hæmaturia, renal colic, or pain of a severe character, but the woman had twice had illnesses associated with pus in the urine.

In still a further case, that of a woman who was under the care of Dr. T. R. Bradshaw, two stones were found in the kidney. This patient had had a discharge of pus from the left kidney for one year. Mr. R. A. Bickersteth proved this by a separation of the urines and after the x ray examination he cut down and removed the stones. The other symptom was simply aching in the left loin; there had been no attacks of renal colic and no hæmaturia. This case is of especial interest as on operation the kidney was found to be quite disorganised and full of pus, and yet the radiograph showed the stones quite plainly, and this notwithstanding the fact that many failures to show stones under such conditions have been attributed to the presence of pus on the ground that it is so opaque to the x rays as to hide the stone shadow. This is one of three cases of a similar nature which I have had to deal with and in all of them no difficulty was found in getting the stone shadows. I do not believe myself that the presence of pus adds to the difficulty or uncertainty of an x ray examination in any way.

You have seen in this case, and in the others alluded to, that the shadows have been very plain indeed, quite unmistakeable; this, however, is not always the case, and not infrequently one has to base the diagnosis on extremely faint markings on the plate, so faint sometimes that it is impossible to reproduce them on either a print or a lantern slide. For instance, in a case, that of a large adult male who had occasional attacks of hæmaturia and nothing else, I found a slight shadow, very indistinct, rather nearer the spine shadow than usual, on four plates taken on two separate occasions. This shadow was thought to be strongly suggestive of stone and Mr. E. Hurry Fenwick operated and found and removed a stone.

We have already seen that stones can be multiple, and this is important, and the x rays will often prevent the possibility of an incomplete operation. A case to illustrate this is that of a young girl, another where the diagnosis and responsibility for the operation were entirely thrown on the x ray evidence, in which two stones were shown to be present. The larger, weighing 22 grains, was found and removed first; the other weighed only two grains, and it is hardly likely that it would have been found if the radiograph had not clearly indicated its presence. In still another way can positive information of this kind help the surgeon. Sometimes in suspected cases the clinical evidence is doubtful as to which kidney, or both, may be the site of the trouble and it has happened that the wrong kidney has been cut down upon. With a carefully conducted x ray examination of the whole stone area on both sides this mistake ought not to occur again. I do not think I can relate a case where the evidence pointed to one side and a stone was found in the other, but the following cases are useful as bearing upon this point and also as showing the importance of examining the whole area.

This slide shows the left ureter region of an adult male and imbedded in the ureter are two large pear-shaped calculi low down against the shadow of the sacrum. Now this man had been operated upon for hydronephrosis some years previously and the left kidney was said to have been removed. After the lapse of time pain in the back and hæmaturia again started; he came to the Royal Infirmary and was sent to me to be examined. Fortunately I examined the whole area. The upper left plate, the region of the removed kidney, showed nothing; the lower left plate showed the two ureteral calculi, whilst the upper right plate showed the right and only kidney to be the site of three calculi. Probably the stones impacted in the left ureter were the cause of the original trouble and had an x ray examination been possible at that time these stones would have been detected and their removal might have saved the kidney.

The other case showing stones on both sides is also interesting and instructive for, amongst other reasons, the passage normally of three out of the four stones originally discovered. In this woman the first plate exposed covered both sides and revealed stones in both kidneys. Taken separately the right kidney region showed three shadows and Dr. Alexander cut down and found a kidney with an enormous pelvis. He felt, but lost, a stone and the woman returned to the ward without any stone having been removed. The operation was in July, 1904. On Sept. 13th of the same year, just after leaving hospital, she passed a small stone weighing seven grains and a few days later another, described as being not so large as a pea, and which, unfortunately, she did not consider large enough to be worth keeping. A radiograph taken in October shows the original largest stone still present, but both of the other shadows have disappeared, and this may be taken as proof that they were due to the stones which had been passed. All this time it was known that she had a small stone in the left kidney and this remained without causing symptoms until September, 1905, when after a railway journey she had a severe attack of left-sided pain and passed a four-grain stone.

From still another point of view can the usefulness of a positive visible diagnosis be made evident. It gives the patient and the surgeon certain knowledge of both the cause and the result of the suggested operation; the operation becomes no longer, so to speak, an exploratory one. The sufferer is encouraged to submit to operation much sooner, dangerous delay is thus avoided, and the surgeon knows exactly what he is going to search for, almost the precise spot in the kidney to incise, and in many cases exactly how many stones there are. It is scarcely doubtful but that many kidneys have in their time been explored for stone which has never been found and which has nevertheless been there all the time. A small stone certainly, a fair-sized one probably, can be imbedded in a kidney, and yet to manipulation by the finger cannot be felt, and even by splitting the kidney cannot be found. This and the next slide illustrate how small calculi can be and yet cannot escape the vigilant x ray eye. The first shows a shadow of a stone in the right kidney of a well-nourished adult male, of fine physique, his symptoms being a few bad attacks of renal colic *plus* hæmaturia. He was a workman, and expectant treatment was of no use to him; he wanted to be relieved of his attacks. With the x ray evidence before him Mr. Thomas cut down, split the kidney, and felt about until he did discover the stone, although in the middle of the operation, not finding or feeling it, he turned to me and said, "Can there be any mistake?" The stone weighed three grains and I look upon this as a case where very easily the operation might have failed except for the certain knowledge given by radiography. In the second case a small, almost tiny, shadow was shown in the right kidney region of a woman. This woman had symptoms of 12 years' standing; she had had attacks of colic, blood in the urine once or twice, and pus in the urine for some years. Nevertheless, in the course of her illness she had had several uterine operations with a view to a cure. The x rays showed this small shadow and two days afterwards the kidney was cut down upon and found to be so disorganised that its removal was necessary, and yet the stone, it was found, did not weigh as much as two grains.

So far the positive diagnosis has been treated solely from the surgeon's point of view, but, although I cannot illustrate this with a case, undoubtedly cases do arise where from the position and size of the calculus an x ray examination would make expectant treatment justifiable. Thus, if the x rays showed a small stone engaged in the ureter with no symptom of obstruction present, this knowledge would be of great value as evidence of the possibility of the passage of the stone and repeated examination might show the stone gradually passing downwards, or after more colic its absence from the ureter and presence in the bladder. Also I would assert that at the present time no physician is justified in making the diagnosis of, and treating his patient for, kidney or ureteral stone unless a proper x ray examination has been made. For instance, a small stone in the ureter might justify expectant treatment; a large one, as seen by the rays, would at once cry out for immediate operative interference in view of the grave danger to the kidney. Again, if the stone is in the kidney much may be learnt from the size and shape of the

x ray shadow as to whether any treatment short of operation holds out any fair chance of doing good. I have watched one case which I had an opportunity of examining at intervals with x rays where the stone slowly increased in size, as shown by the size of the x ray shadows, and all the time, many months, the man was taking medicine "with a view to dissolve the stone." During this same period the stone quadrupled itself in size. I had advised operation at the first, but "as a result of taking medicine," so he told me, all his attacks of pain, typical renal colic attacks, had ceased and he was convinced that the medicine was doing its work. His attacks ceased for nearly a year, then the x rays showed the unmistakeable larger shadow, and soon afterwards he had another attack of renal colic.

I should imagine that a very large number of the cases "cured by medicine"—of course, I am not alluding to cases where small stones have passed down the ureter and been eventually voided—are either cases where for a time at any rate the stone has become imbedded or fixed, or are cases where there never has been a stone present from the beginning. It is a point for discussion as to whether, knowing of the existence of a stone, or stones, in a kidney, one is justified in advising an otherwise healthy person to delay operation. I take it that a stone may always suddenly set up serious symptoms, producing rapid destruction or damage of a kidney, or it may all the time be quietly destroying or disorganising the kidney as an efficient urinary organ.

DOUBTFUL CASES.

Thus far I have dealt with positive results, by which I mean those where from the nature, size, and position of the shadow or shadows there could be no doubt as to the reliability of the x ray examination. Next I wish to deal with what may be termed "doubtful cases"; where certain shadows appear and yet are not conclusive; and it is in these cases that expert opinion becomes of the utmost value. I have made mistakes myself in interpreting these plates and shall probably make more, but radiography is still in its infancy and the number of cases examined has been too small as yet to make one always dogmatic and each mistake made adds to experience and helps one in future cases of doubt. A certain number of cases with symptoms suggestive of stone come for examination and plates—good ones, almost too good sometimes—are obtained and these show certain shadows which might or might not be stone shadows. As a rule there is something about them—in their shape, number, and position—which leads one to hesitate. At first, if such occurred within the stone area, the conclusion was at once jumped at that stones they must be; then a few mistakes made by myself and reported by others began to make one more careful.

I have already referred to a case where a calcareous gland cast a shadow in the line of the ureter whilst there was also a stone in the kidney; and there is no doubt but that calcareous glands are common and often cast shadows within the stone area. It is often very difficult to make the differential diagnosis. Some little time ago a kidney was cut down upon and very carefully examined on the strength of some radiographs taken by myself and the opinion I gave. No stone was found and in the light of later experience probably the shadows were those of calcareous glands. The shadows were not like those which stones give and if this case had not been an early case the mistake would not have arisen. Masses of fæces are said to have given rise to shadows simulating stone shadows. I have had no experience of this, but a good clearing out of the bowels and a second examination, which is always necessary if there is the slightest doubt about a shadow, would clear up this point.

Two other conditions are easily shown and could either of them, in certain circumstances, simulate shadows of ureteral calculi. I have had experience of both. In the pelvic region phleboliths often give good shadows. In this region in an elderly man with urgent symptoms the plate showed six small rounded shadows. When it was taken I had had no previous experience of such a thing and did not know what the shadows meant and it was suggested that the shadows might be due to small calculi in the orifices of the ureters or fixed to the bladder walls. The symptoms demanded operation whatever the diagnosis, so Mr. Paul opened the bladder, which proved to be empty as regards stone, but the seat of new growth. Future cases showing similar shadows, together with the experience of others, suggest phleboliths as the probable explanation. Mr. Hurry Fenwick has also reported a case where a small calcareous patch on an artery threw a shadow exactly in the line of the ureter; certain symptoms necessitated operation and this patch was searched for and found. In a similar case referred to me by Mr. George Hamilton in a man suffering from hæmaturia a shadow was found in the line of his ureter and thought to be a ureteral calculus. At the operation Mr. Hamilton could find no stone but felt what he took to be a hard patch in the wall of an artery just at the suspected spot. The hæmaturia turned out to be due to malignant disease of the bladder. It is often very difficult indeed to estimate these shadows at their true value. For instance, a radiograph of the bladder of an adult male showed what was obviously, from its position, size, and shape, a stone in the bladder lying centrally, but on either side from this at a distance of about one and a half inches were two distinct, small, rounded shadows. The operation by Mr. Bickersteth did not clear up the diagnosis; he found and removed the stone, could feel nothing else, but the radiograph taken afterwards still showed the two small shadows undisturbed—probably, again, in this case due to phleboliths or calcareous patches.

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THE NEGATIVE DIAGNOSIS.

And now I come to the final division of my subject—namely, "What reliability can be placed on the negative diagnosis from the x ray point of view?" We have already dealt with the difficulties and mistakes which may arise from the presence of doubtful shadows, but what is to be said when careful examination reveals no shadow at all? Is a surgeon or physician justified in relying upon this to prove that no stone is present? Let me quote a few opinions on this matter. Hugh Walsham in October, 1904, writes: "As far as my experience goes it is next to impossible to find the shadow of a renal calculus in a stout patient." H. B. Robinson in December, 1904, says: "The use of x rays as a means of diagnosis is of very doubtful value; most surgeons are agreed that it is better not to allow x rays the casting vote in deciding for or against operation." This means, of course, that if x rays show a stone, well and good, but they must not be allowed to stop a suggested operation if they do not show a stone. R. Clement Lucas in October, 1904, writes a paper and quotes cases, urging very strongly that the negative x ray diagnosis is one which should not be relied upon. Many others have written in the same strain. On the other hand, Leonard of Philadelphia has for many years insisted on his ability to be able always to give a *certain* negative diagnosis under certain conditions—this latter an important point. And Hurry Fenwick, whilst insisting that "it cannot be too firmly impressed upon all that visceral radiography demands an expert," also says that "I know of no obligation so great as that under which

the expert radiographer places the surgeon and patient when he accurately defines a stone in the lower ureter." This opinion clearly indicates the very great difference in value set upon the reliability of x ray examination of the kidneys and ureters. What does it mean? Well, I take it there are two classes of men at any rate who at present decry the reliability of x rays. One consists of those men who are always disinclined for new methods. The second consists of certain radiographers who cannot through want of technical skill obtain the results which some of us claim to be possible.

Now let me frankly confess that I am not one of those who would go so far as to insist that it is possible to negative with certainty the presence of a stone in all cases. Far from it. To begin with, a stone may be so small and so transparent that in no circumstances would it be possible to show it with x rays. I show a tiny stone, if indeed it is large enough to be called a stone at all, probably pure uric acid, and so transparent to x rays that it scarcely casts any shadow when viewed with the screen. I do not believe it would be possible ever to show such a stone with x rays *in situ* either in the kidney or ureter, and yet this stone produced symptoms and was passed after an attack of colic. I had rayed the patient a few weeks before and had expressed an opinion that probably no stone was present. He wrote me a somewhat indignant letter on the subject of the failure of the x rays to show the stone. At the same time I do not consider that in this case a mistake was made at all. It must be clearly understood that in the life-history of every stone, whatever it consists of, it must reach a size which is reasonable before x rays can deal with it, and in giving a negative opinion one always means that tiny things of this kind are not under consideration. No surgeon would dream of cutting down on such a thing as this even if x rays could show it, and when one negatives a stone one implies that the stone would be of such a size that at any rate it might be able to lodge in and obstruct the ureter to the danger point, or large enough, say, to warrant the performance of an operation for its removal. I have shown you several radiographs of exceedingly small stones *in situ* but there must be a limit to the size which can be shown. Again, in some cases it is not possible to obtain plates of the necessary quality to warrant a negative diagnosis, or it may not be possible to make the necessary number of examinations to obtain such plates. In these cases all one can say is "that the plates do not show any stone shadow but are not such that one is warranted in making the positive negative diagnosis." If radiographers would only recognise this position then fewer so-called mistakes would occur.

Now what do I mean by plates of the "necessary quality"? This can be best expressed in the words of Leonard's axiom, with which I am entirely in agreement. It is: "If in making the examination x rays are employed which will differentiate between the shadows of tissues less dense than the least dense calculus all calculi will be found." That is, if you can obtain plates, taken under proper conditions, which show soft tissue differentiation all over the region of the kidneys and ureters, then no stone can be present if there is no shadow of such. These plates can nearly always be obtained, if not at one sitting then at another; but in some cases of very stout people it is not at present possible to get negatives fulfilling these conditions. Thus you will see that it is not always possible to be quite sure of the negative in all cases, and mistakes have arisen, and I fear will continue to arise, not because the x rays are at fault, but because radiographers and surgeons place their confidence on plates which do not justify this.

Taking all my cases together, except in those instances mentioned in this paper, no mistakes have been made in the positive diagnosis, and I may say that in four cases where the patients were very stout the diagnosis was made and the operation urged on negatives where the shadows were so faint that to obtain prints from them was almost impossible. In a certain number of cases one has had to say that, although the plates showed no shadow, the results were not such as to allow one to give a decided opinion. In the cases where a decided negative opinion was given, in none which I have been able to trace has anything happened so far to shake one's confidence in the x ray diagnosis. Four of these cases were operated upon and conditions other than stone found. A number of the hospital cases I cannot trace, beyond the fact that none of those who were in-patients left without amelioration or disappearance of symptoms. Curiously, nine cases, most of them very suspicious and several of which had been under medical treatment for some time for kidney stone, have been reported to me by their different medical men as "absolutely cured" "since the x ray examination"—a fact which almost suggests that an x ray examination is quite as curative in its effects as dissolving the stone with medicine. I have to thank all those physicians and surgeons who have kindly allowed me to make use of their cases for the purposes of this paper. The total number of cases is 79, and in 22 of these a stone or stones have been found. In ten cases other shadows occurred, some easily differentiated from stone, others not.

Finally, I would sum up my remarks as follows:—1. When a stone or stones are present in such size as to produce symptoms suggesting the desirability of operation, if a careful and thorough examination is made such stone or stones can nearly always be shown by x rays. And this would also apply to the presence of stone even if the symptoms alone were not sufficient to demand operation. 2. In most cases where shadows are shown the size, shape, and position can be relied upon in diagnosing them as from kidney or ureteral stones. In other cases when doubt may arise as to the cause of the shadows the experience of the examiner will often settle the matter and in some cases stereoscopic radiography, the use of ureteral bougies, &c., can be used as a help. 3. The negative diagnosis can be relied upon only when the whole region on both sides is carefully examined and when the plates are taken under the essential condition for successful examination and when they are of the necessary quality in showing sufficient differentiation of the soft structures in the kidney and ureteral regions. 4. There can be no justification for operation or prolonged medical treatment without an efficient x ray examination being made.

Liverpool.

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THE following notes of a case under the care of Dr. T. Cameron, surgeon to the Victoria Hospital for Sick Children, Hull, are of some interest.

The patient was taken to the hospital 24 hours after birth, with the history of not having passed a motion or urine. The child was born at full term; the labour was normal. The mother was healthy and primiparous. No history of the father could be obtained. On examination the child was found to be healthy in every respect but that of the genital organs. The heart and lungs were normal. The abdomen was slightly distended and was resonant all over. The liver and spleen could not be felt; no tumour was detected. No distension of the bladder was found. The anus was absent; a very slightly marked dimple could be seen in the usual situation of the anus. No rectal impulse was felt when the child cried. Two folds of much corrugated skin ran forwards from the anal dimple, forming a pendulous prominence in front, which inclosed a small cavity lined with mucous membrane, in the floor of which two meatuses presented. By inspection it was impossible to say whether these cutaneous folds were labia majora (in which case there was complete absence of anything like labia minora) or whether they represented the cleft halves of a penis in the condition of hypospadias, so that up to this time the sex of the child had been undetermined. Of the two meatuses one was found to be blind, admitting a probe for about half an inch; the other admitted a probe in a backward direction for a distance of one inch, the probe then passing into a fair-sized cavity.

Operation.—A left lumbar colotomy was performed under cocaine and a long director was passed through the distal end of the divided bowel, whereby it was judged that the blind end was situated about the level of the promontory of the sacrum. An incision was made through the anal dimple from the tip of the coccyx forwards and deepened in an attempt to draw the blind end of the gut down to the perineum but this end could not be found from below. The urethral canal was found patent and was left untouched.

For the next four days the patient took nourishment well, and passed fæces freely through the colotomy orifice and

x ray shadow as to whether any treatment short of operation holds out any fair chance of doing good. I have watched one case which I had an opportunity of examining at intervals with x rays where the stone slowly increased in size, as shown by the size of the x ray shadows, and all the time, many months, the man was taking medicine "with a view to dissolve the stone." During this same period the stone quadrupled itself in size. I had advised operation at the first, but "as a result of taking medicine," so he told me, all his attacks of pain, typical renal colic attacks, had ceased and he was convinced that the medicine was doing its work. His attacks ceased for nearly a year, then the x rays showed the unmistakeable larger shadow, and soon afterwards he had another attack of renal colic.

I should imagine that a very large number of the cases "cured by medicine"—of course, I am not alluding to cases where small stones have passed down the ureter and been eventually voided—are either cases where for a time at any rate the stone has become imbedded or fixed, or are cases where there never has been a stone present from the beginning. It is a point for discussion as to whether, knowing of the existence of a stone, or stones, in a kidney, one is justified in advising an otherwise healthy person to delay operation. I take it that a stone may always suddenly set up serious symptoms, producing rapid destruction or damage of a kidney, or it may all the time be quietly destroying or disorganising the kidney as an efficient urinary organ.

DOUBTFUL CASES.

Thus far I have dealt with positive results, by which I mean those where from the nature, size, and position of the shadow or shadows there could be no doubt as to the reliability of the x ray examination. Next I wish to deal with what may be termed "doubtful cases"; where certain shadows appear and yet are not conclusive; and it is in these cases that expert opinion becomes of the utmost value. I have made mistakes myself in interpreting these plates and shall probably make more, but radiography is still in its infancy and the number of cases examined has been too small as yet to make one always dogmatic and each mistake made adds to experience and helps one in future cases of doubt. A certain number of cases with symptoms suggestive of stone come for examination and plates—good ones, almost too good sometimes—are obtained and these show certain shadows which might or might not be stone shadows. As a rule there is something about them—in their shape, number, and position—which leads one to hesitate. At first, if such occurred within the stone area, the conclusion was at once jumped at that stones they must be; then a few mistakes made by myself and reported by others began to make one more careful.

I have already referred to a case where a calcareous gland cast a shadow in the line of the ureter whilst there was also a stone in the kidney; and there is no doubt but that calcareous glands are common and often cast shadows within the stone area. It is often very difficult to make the differential diagnosis. Some little time ago a kidney was cut down upon and very carefully examined on the strength of some radiographs taken by myself and the opinion I gave. No stone was found and in the light of later experience probably the shadows were those of calcareous glands. The shadows were not like those which stones give and if this case had not been an early case the mistake would not have arisen. Masses of fæces are said to have given rise to shadows simulating stone shadows. I have had no experience of this, but a good clearing out of the bowels and a second examination, which is always necessary if there is the slightest doubt about a shadow, would clear up this point.

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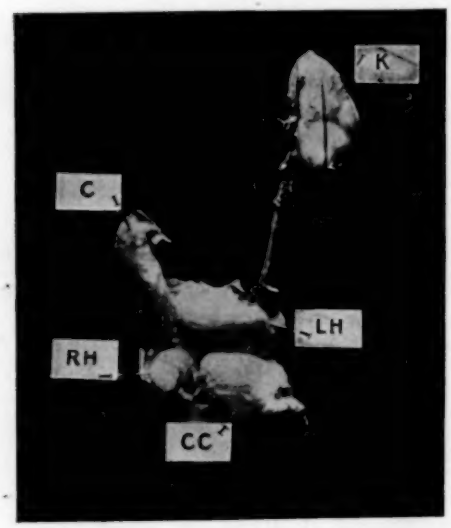
For the next four days the patient took nourishment well, and passed fæces freely through the colotomy orifice and

urine through the meatus. On the fourth day the child suddenly became cold and blue and died in half an hour, apparently from heart failure.

Necropsy.—At the post-mortem examination the thoracic organs were found healthy. In the abdomen there was no peritonitis and the condition of the parts about the colotomy was perfect. Rising from the pelvis were two very well-developed horns of a completely bi-cornuate uterus; each horn showed a well-marked mesometrium with tube, ovary, and round ligament. The horns were conical in shape and each curled outwards; the left measured one and a quarter inches from tip to base, the right one inch. This bi-cornuate uterus was situated between, and closely incorporated with, a bladder in front and a hollow organ behind which appeared to be a remnant of a cloacal cavity. The left ureter passed in front of the left horn and entered the bladder on its upper surface. The walls of the latter were hypertrophied and the cavity of the bladder was found to be extremely contracted. The descending colon reached in a normal way the level of the left iliac crest, all the gut above this level being perfectly normal, and then crossed inwards and passing into the angle between the horns of the uterus opened into the cloaca. The cloaca was blind below and reached to within an eighth of an inch from the skin of the perineum, but was just anterior to the anterior end of the line of incision made. The posterior wall measured one and a half inches from side to side and two inches from above down and presented a free surface; the anterior wall was indissolubly united to the posterior wall of the bladder; no communication between the two organs was, however, found. On opening up the cloaca a cavity was found with thin walls, about the same thickness as of the bowel. Three apertures were found—viz., that of the colon, a small obliquely shaped meatus; those of the two horns of the uterus, the right one being a quarter of an inch in diameter, the left much smaller. Both horns were patent to the tips and no cervix formation was present in either. The kidneys were of full size and healthy; there was no cystic formation.

Hull.



Shows the relation of the organs at the necropsy. K, Kidney. C, Colon. R H, Right horn of uterus. L H, Left horn of uterus. C C, Cloacal cavity.

CLERICAL AND MEDICAL GOLF MATCH.—An interesting match took place at Redway Hill, near Bristol, on May 22nd between teams representing the clergy and the medical profession of Bristol and Clifton. The medical men won somewhat easily.

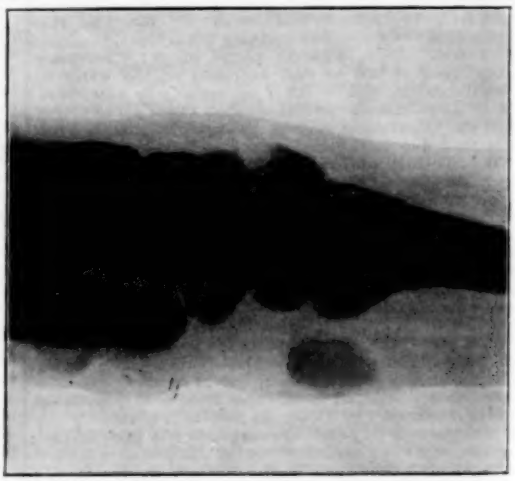
A RARE INJURY TO THE WRIST-JOINT.

BY ARTHUR S. MORLEY, F.R.C.S. ENG.

FRACTURES and dislocations of the carpal bones are accidents usually regarded as of rare occurrence and, so far as I am able to ascertain, very few cases of fracture-dislocation of these bones have been recorded. Pick[1] says: "The bones of the carpus ..... are little liable to fracture, except from extreme violence, when the parts are so comminuted that amputation becomes necessary." Stimson[2] mentions three cases of dislocation of the scaphoid, in one of which the direction of the displacement was forward. A case of fracture-dislocation of the scaphoid, somewhat similar to the one about to be described, was recorded last year by Fullerton,[3] and Corner[4] showed a young man at the Clinical Society who had several bones of the carpus fractured and dislocated. Haughton and Holt[5] also mention a few cases of fracture of several bones with dislocation of the fragments. The following case was recently under my care.

The patient, a man, aged 42 years, was thrown out of a motor-car at Yarmouth, apparently falling on to the hand. The left ulna was fractured about three and a half inches below the elbow-joint and the lower end was forced out through the coat-sleeve. The radius was fractured near the middle of the shaft and also at the styloid process. The medical man who treated him at Yarmouth found it necessary, after removing a piece of the ulna, to apply a fixed plaster-of-Paris splint extending from above the elbow to the fingers, keeping the elbow nearly straight and the fore-arm midway between pronation and supination. The wound was dressed through a "window" in this plaster case and healed satisfactorily. The casing was kept on the limb for five weeks and the patient was then taken to London to see Mr. Edmund Owen, by whom he was kindly sent back to me. When Mr. Owen removed the plaster case the following conditions (which are illustrated by the admirable skiagrams taken for me by Messrs. H. and W. Davis of Grafton-street) were found. There was great swelling of the whole limb, the fractures of the ulna and radius were firmly united, but there was great formation of callus around the fracture at the upper end of the ulna. There was considerable shortening of the ulna, the lower end of which could be made out about three-quarters of an inch above the joint. Lying above the wrist-joint, exactly over the median nerve,

FIG. 1.



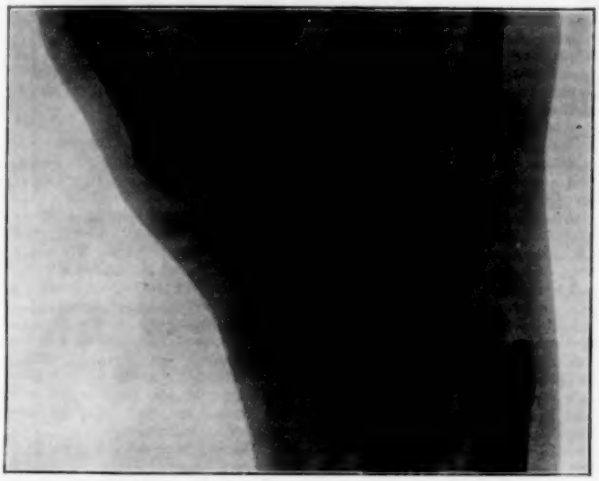
Side-view showing the dislocated scaphoid.

[1] Fractures and Dislocations, p. 219.
[2] Stimson: Fractures and Dislocations.
[3] THE LANCET, June 10th, 1905, p. 1572.
[4] Transactions of the Clinical Society, vol. xxxviii., p. 224.
[5] Journal of the Royal Army Medical Corps, September, 1904, p. 282.

was a rounded moveable bony prominence (Fig. 1) which was taken to be a dislocated semilunar bone. The wrist appeared to be partially dislocated outwards (Fig. 2). The joints were all very stiff and were forcibly moved under an anæsthetic. Energetic massage and passive movements were then employed and three weeks later, as the dislocated bone was interfering with the functions of the median nerve, it was removed through a small incision. It required little more than a simple incision down to it to effect its dislodgement. When subsequently examined it proved to be the inner half of the scaphoid bone (Fig. 3) and showed a clean cut fractured surface on its outer side. The outer half of the bone apparently remained in articulation with the trapezium and trapezoid. The wound healed by primary union.

The present condition of the limb, eight months after the accident, is as follows. The shoulder-joint is now normal; the elbow-joint allows of flexion to within 10 degrees of the normal and of complete extension. There is absolutely no movement at the radio-ulnar joints and apparently the two bones are firmly fixed together by a bridge of callus (which, however, was too recent at the date at which the skiagram was taken to show a shadow). It has not been considered wise to suggest any operation to ameliorate this condition of affairs, as the patient has a very useful limb and is the subject of granular kidney of some severity. The wrist-joint permits flexion and extension through a range of about 15 degrees and lateral movements through about 25 degrees.

FIG. 2.



Showing outward dislocation of the wrist.

The movements of the fingers are still not completely restored, especially at the metacarpo-phalangeal joints, but the patient can use them for any but delicate manipulations. This stiffness, which no longer diminishes under the influence of active and passive forcible movements, is at least partly due to the abnormal course of the tendons which have been displaced from their proper grooves on the lower end of the radius. Sensation in the fingers is completely recovered.

FIG. 3.

Portion of fractured scaphoid removed.

It has seemed to me to be worth while to publish this singular accident because in none of the cases recorded and quoted above has the scaphoid bone been cleanly fractured in two whilst a *forward* dislocation of one of the fragments is especially unusual. Neither have the other recorded cases shown the partial outward dislocation of the rest of the carpus. No doubt this latter condition has been caused in part by the drawing up of the lower end of the fractured ulna and by the absence of half of the scaphoid bone. The result has, on the whole, been very satisfactory taking into consideration the multiple severe injuries and the unhealthy general condition of the patient. Had passive movements and massage been employed earlier in the case, before the patient returned to London, there can be little doubt that the vicious union between the radius and ulna might have been avoided and the ultimate usefulness of the limb would have been even greater than it actually is.

Gower-street, W.C.

THE USE OF RUBBER GLOVES IN MEDICAL WARDS.

BY THOMAS WOOD CLARKE, A.B., M.D.,

LATE MEDICAL HOUSE OFFICER, JOHNS HOPKINS HOSPITAL, BALTIMORE; AND RESIDENT PHYSICIAN LAKESIDE HOSPITAL, CLEVELAND, U.S.A.

"IN these days of ready invention a glove, I think, might be devised which should be impervious to fluids, and yet so thin and pliant as not to interfere materially with the delicate sense of touch required in these manipulations. One such glove, if such shall ever be fabricated and adopted, might well be sacrificed to the safety of the mother in every labour."[1]

The above paragraph from the writings of Sir Thomas Watson, published towards the end of the first half of the last century, is a strong plea for the use of gloves in the prevention of puerperal sepsis and is probably the first mention of gloves in medicine. Indiarubber was then, however, in its infancy as an article of commerce and it was not until nearly 50 years later that Halsted, in 1889, first made use of rubber gloves in his surgical technique.[2] In 1894 the subject became of general interest and by 1900 most European and American surgeons were using gloves in their practice. So much has been written during the past ten years by such men as Mikulicz,[3] Manteuffel,[4] Keen,[5] Robb,[6] McBurney,[7] and hosts of others, and the use of gloves has become so extensive in surgery, obstetrics, and pathology, that there is little left to be said upon the subject from the point of view of these branches of the profession. The value of rubber gloves to the medical man, however, is so slightly appreciated, and their use in medical wards is so rare, that it may not be out of place to discuss the subject from the physician's standpoint. As to the literature, I have been able to find but one article which with any adequacy covers the medical aspect of the rubber glove, and this, though most excellent in itself, is inaccessible in London and was obtained only through the courtesy of the author, M. Faure of Paris.[8]

The subject may well be discussed under three headings: the protection of the patient from the physician, the protection of the physician from the patient, and the protection of the patient from his fellow.

It not infrequently occurs in the wards of a hospital that the so-called "medical operations" must be performed. These are often undertaken with great trepidation, owing to the fear of sepsis, a fear well grounded, especially if the operator is a man who has done little or no surgery for several years. It is, indeed, a serious matter to introduce

[1] Sir Thomas Watson: Lectures on the Principles and Practice of Physic, London, 1843, vol. ii., p. 349.
[2] W. S. Halsted: Johns Hopkins Hospital Reports, vol. ii., No. 5, 1891.
[3] Mikulicz: Revue de Chirurgie, Paris, 1898, vol. xviii., p. 943.
[4] Manteuffel: Centralblatt für Chirurgie, 1897, vol. xxiv., p. 553.
[5] Keen: Annals of Surgery, 1898, vol. xxvii., p. 224.
[6] Robb: Cleveland Medical Gazette, 1900-01, vol. xv., p. 553.
[7] McBurney: Annals of Surgery, 1898, vol. xxviii., p. 108.
[8] Faure: Revue Générale de Clinique et de Thérapeutique, Paris, 1903, vol. xvii., p. 737.

infectious material from the outside into a punctured wound and then to seal up the outlet, and more especially so when this wound leads into the pleural or peritoneal cavity, as in the case of a paracentesis, into the meninges in lumbar puncture, or directly into the circulatory system in intravenous injections. Any procedure which will tend to lessen the danger in these operations is surely an advance in the facility of definite diagnosis of doubtful cases and of consequent treatment, and anything which lessens the liability to sepsis is such a procedure. The advantage of rubber gloves in operations, their ease of sterilisation, their impermeability to bacteria,[9] and their immaterial interference with touch and action, have been so thoroughly proved by the surgeons that they must be accepted as facts requiring no further defence. And so, inasmuch as each year the rubber glove comes to be considered less and less as a merely desirable adjunct to surgery and more and more as a necessary one, just so rapidly its value should be appreciated in the medical ward when the physician has to expose his patient to the dangers of sepsis. During the past two years, while in charge of an active medical service in a general hospital, I have made use of rubber gloves in performing infusions, venesections, intravenous injections, paracenteses, and lumbar punctures, and if I have no proof of having saved life by their use I have at least the satisfaction of feeling that I have done everything in my power to eliminate danger.

Passing on from the safety of the patient we come to the protection of the physician and nurse in handling certain classes of cases, a subject which has an æsthetic as well as a practical aspect. Cases of "obstetrical chancre," though happily not common, are of sufficiently frequent occurrence and grave consequence to deserve consideration, especially as the disease may be contracted when no suspicion of danger exists. The use of rubber gloves, worn during all vaginal and rectal examinations is obviously a great safeguard against syphilitic infection and their value depends entirely upon their practicability. By many it is contended that the gloves so materially interfere with the sense of touch that their use is a hindrance to the physician and a danger to the patient and for this reason should not be worn. My experience, however, leads me to differ from this opinion. By the use of a glove sufficiently thin, pliant, and well-fitted, with the fingers short enough to prevent wrinkling at the tips, the interference with the tactile sense is so slight that it may be largely disconsidered. At first a finger trained to direct palpation may feel strange when encased in a glove but in a short time the brain learns to allow for the slight additional resistance and then as much can be made out with a glove as without one. In fact, I once heard an eminent surgeon say that he had used gloves for so many years that he thought if he attempted to operate without them that things would feel unnatural. Though it would probably take the average physician some time to reach this Utopian stage he can approximate it in a remarkably short time and if confused in his early efforts he can with ease remove the glove and confirm his findings with the naked finger. Besides preventing the danger of infection the use of the glove obviates entirely those disagreeable clinging odours, which at times no amount of washing will remove, which make the physician, sometimes for hours after an examination, revolting to himself, burdensome to society, and obnoxious to his patients. The nurse, too, may be protected against infection by the use of a heavier glove to be worn while handling specific cases, when giving inunctions, douches, enemata, &c.

It may seem at first sight that the use of thin, fragile gloves for the above purposes would be a great additional trouble and expense. With a moderate amount of care, however, on the part of the physician one pair of gloves of good quality will last for many weeks or even months, thus reducing the expense to a minimum. The technique of caring for the gloves consists of washing them immediately after use, boiling for a few minutes, drying thoroughly, care being taken to prevent burning, and powdering inside and out with talcum powder. This takes but a very few minutes of a nurse's time and so prepared the gloves keep in good condition for a long time and are ready for use at a moment's notice for examinations, or they may be boiled with the instruments when surgical cleanliness is required.

There now remains to be considered the protection of the patient from his fellows. Though most general hospitals have adequate provisions for the isolation of contagious diseases in many those cases classed as infectious must be treated in the open wards. It is in the latter contingency that the rubber glove is of value. This is especially true in diseases where the infection is carried through the excreta. The thorough disinfection of the hands of a nurse in a busy ward, whenever she gives a bedpan to a typhoid patient or changes linen soiled by excreta, is a difficult procedure and the most conscientious nurse may become a source of danger to other persons. If this is true of adult patients it is even more striking in a children's ward during the summer months, when the duties of the overworked nurses consist largely of changing the soiled napkins of diarrhœa cases and of preparing the children's nourishment. The infectiousness of entero-colitis, whether due to Shiga's bacillus or to some other organism, is sufficiently well proved and enough ward epidemics of diarrhœa have occurred, where the original supply of milk has been of undoubted purity, to make it evident that contamination may take place in the ward. The thought is not a pleasant one of a nurse, with hands more or less fouled from a fluid stool, giving a biscuit or a bit of bread-and-butter to a child. Even the knowledge that she has washed her hands between times and "disinfected" them by a perfunctory dip into a carbolic acid solution does not make the thought entirely agreeable.

During a house epidemic of typhoid fever at the Lakeside Hospital in Cleveland in January, 1904, a committee was appointed, of which I was a member, to investigate the cause of the outbreak and to take necessary steps to check it. Among other changes recommended was the use of rubber gloves by the nurses whenever handling bedpans, soiled linen, or napkins of typhoid and enteritis patients. The technique was made as simple as possible. A large dish of carbolic solution was placed in each lavatory and in it were kept several pairs of heavy strong rubber gloves, similar to those commonly worn by pathologists. To facilitate rapid changes they were several sizes larger than the hands of the nurses. When a bedpan was called for, or a napkin to be changed, the nurse rinsed a pair of the gloves in water and slipped them on her hands, a procedure requiring but a few seconds. The gloves were kept on until the stool was taken to the lavatory, broken up with a glass rod, if solid, and carbolised. They were then returned to the carbolic solution and were soon ready to be used again. The objection at first raised of lack of time to carry out these innovations was soon dropped and within a few days the nurse began to look upon the glove as a boon instead of a hardship. Not only was time saved by the reduction of the amount of scrubbing required but it was soon found that the hands, previously kept cracked and sore by the frequent soaking in carbolic acid, were again resuming their normal healthy condition and were kept clean with less trouble and without pain. This procedure has been used constantly for the past two years and has given complete satisfaction.

In one other condition I would suggest the possible value of this use of the rubber glove, though I do not speak from personal experience. This is in that unhappy epidemic which occasionally breaks out in a children's ward of vulvo-vaginitis, due to an organism resembling the gonococcus, and which spreads rapidly to every female child in the ward and may even require the temporary exclusion of girl patients. As this affection attacks infants as well as older girls bedpan infection can be excluded. It is possible, but seems unlikely, that air contagion is the cause. It is not pleasant to think of the hand of the nurse as the means of transmission but this possibility must not be forgotten. If this be the cause, surely the precautions taken with cases of typhoid fever and diarrhœa may be so modified as to be of value in combating this disease as well.

It is not the purpose of this paper to cover exhaustively the many uses of rubber gloves but rather to point out a few ways in which they have been of value, in the hope that the physician may not fall too far behind the surgeon, the obstetrician, and the pathologist in his appreciation of their worth. The paper is written from the standpoint of the hospital ward, but much of the contents apply equally well to private practice.

I wish to express my thanks to Dr. George W. Crile, Dr. Edward F. Cushing, and Miss Katherine Lilly of Cleveland; to the first for the reference to Sir Thomas Watson; to the second for many of the ideas here incorporated; and to the last for the exact technique of the care of the gloves at the Lakeside Hospital and for her opinion of them from the nurses' standpoint.

[9] Fox and Schumann: American Journal of the Medical Sciences, 1905, vol. cxxx., p. 636.

A CASE OF ANGIO-NEUROTIC ŒDEMA.

BY CLAUDE A. P. TRUMAN, L.R.C.P. EDIN.

IN the average text-book of a few years ago this disease was generally passed over without notice and even now it is not easy to find anything beyond a casual mention of it. I have recently had under my care a case which I was able to watch closely and being comparatively ignorant upon the subject I was glad to be able to follow the cycle of events from day to day. Moreover, my interest in it has been considerably increased after reading Dr. Francis Hare's excellent article in the February *Practitioner* upon "Paroxysmal Neuroses," for, although in these he does not include angio-neurotic œdema, many of his general conclusions apply with remarkable force to this particular disease, as I will later attempt to show.

The patient, a healthy adult male with no neurotic tendencies, went to bed in his usual health and awoke shortly after midnight in considerable discomfort from a unilateral (right) swelling of the tongue, which was obviously increasing rapidly. Within half an hour the left side had begun to swell and by 2 A.M. the whole tongue was so large as to be contained within the mouth with difficulty. There was no pain, and a slight amount of dyspnœa only, but there was intense discomfort owing to the size of the organ, the "hide-bound" feeling which it occasioned, and the increase of secretion. Intelligible speech was impossible. At 4 A.M. a decided subsidence was noticeable and by 8 A.M. the swelling had so far disappeared as to remove most of the discomfort. Although a feeling of increase of heat was complained of, this was not perceptible to the touch but several scattered and small submucous hæmorrhages were visible. 48 hours from the time of the first onset the upper lip began to swell in the same manner, the right angle of the mouth being first involved, the œdema extending along it to the left. This became so extensive as to cause partial erosion of the lip, giving at first sight the appearance of erysipelas. The mucous membrane acquired a purplish tint and presented submucous punctate hæmorrhages similar to those observed upon the tongue. Complete subsidence occurred during the course of the day. 48 hours later the lower lip followed suit, the previous cycle of events being closely followed. The pyloric end of the œsophagus was the next part attacked, giving rise to the most intense discomfort, if not pain, during the act of deglutition. In this case the symptoms abruptly disappeared within six hours. On the following night a sensation of extreme nausea supervened, indicating a similar condition of the stomach. Had vomiting occurred one would have expected to find the vomited matter blood stained. The right lower eyelid came next, the upper lid and ocular conjunctiva soon becoming involved. The swelling was sufficiently severe nearly to occlude the eye and the conjunctiva bulged round the cornea which was quite recessed. 12 hours removed all traces of the attack with the exception of the conjunctiva which remained injected for two days.

The further progress of the case was remarkable inasmuch as the œdema recurred week by week with almost unfailing regularity, affecting the various parts mentioned in the same order as in the first instance. It was, in fact, almost possible to tell the day of the week by the shape of the patient's face. Each attack was noticeably less acute and of shorter duration than the previous one and two months after the first onset the symptoms became so slight as to be chiefly subjective.

Another point of interest was the occurrence on two occasions, *between* the periods of greatest activity of the neurosis, of a slight rigor and a rise of temperature, upon the first occasion to 103·7° F. and upon the second occasion to 102·4°. I am uncertain whether this fact goes to suggest a malarial or infective origin of the disease in this case but it was particularly noticed that during the pyrexia there was a complete absence of œdema, although, according to computation, such an access was "overdue." I shall refer to this point later.

I will now attempt to show how pertinent are Dr. Hare's remarks upon "paroxysmal neuroses" generally and as applied to angio-neurotic œdema which I think he would class in the same category. I can here only briefly refer to his excellent article in which the basis of his hypothesis is that reduction of carbonaceous income, or increase of carbonaceous expenditure, of the blood tends to prevent paroxysmal neuroses; the converse to excite them. He points out that there is a marked fluctuation in the combustion of carbonaceous material during the diurnal cycle, combustion being at its lowest in the early hours of the morning and rising steadily to midday. It is to be noted that each attack of œdema occurred in the small hours and rapidly subsided as the day wore on. Moreover, he states that the diurnal fluctuation in combustion depends primarily upon the sleeping and waking states, hence a double reason for the onset of the neurosis in the night hours. Physical exercise greatly increases the rate of combustion and it was a noticeable fact that either talking or eating rapidly reduced the œdema of the tongue and lips, solid food exercising a more powerful influence than liquids. With regard to the œdema of the eyelids, this was found to disappear far more rapidly under the effect of brisk outdoor exercise than when a sedentary occupation was followed.

I have already said that no œdema occurred during the time the pyrexia lasted, which is also to be explained by the fact that such a condition involves a large increase of combustion. Absorption of carbonaceous material from the alimentary canal being dependent upon the velocity of the alimentary current accounted for the temporary benefit of purgatives upon the œdema. Conversely, the œdema was more in evidence when constipation was present and the neurosis was, as a matter of fact, preceded for several weeks by a period of constipation.

Dr. Hare submits that the paroxysmal neuroses, such as epilepsy major, migraine, and asthma, to which may, I think, be added angio-neurotic œdema, are dependent to a great extent upon the failure of the "decarbonising functions" and his deductions are very apposite in relation to the cycle of events presented by this neurosis.

As regards treatment, this was at first purely tentative but I gratefully acknowledge the helpful suggestions given to me by several fellow-practitioners. The drug that appeared to be of most service was salicylate of quinine; indeed, when this was temporarily withdrawn the œdema immediately recurred, only to disappear again upon the treatment being resumed. This fact suggested to me the malarial or infective origin of this case, though, in further support of Dr. Hare's theory, I find that Dr. Wood and Dr. Reichert have demonstrated that quinine tends to increase the rate of combustion.

I regret that my experience of this disorder is so limited, for it would be interesting to study cases side by side, some of which owed their origin to each of the usually recognised causes.

Reading.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

SUSSEX COUNTY HOSPITAL.

A CASE OF GENERAL GLANDULAR HYPERPLASIA, GENERAL STREPTOCOCCAL INFECTION, AND OBSOLETE TUBERCLE.

(Under the care of Dr. E. HOBHOUSE.)

A MAN, aged 60 years, was sent into the Sussex County Hospital on March 2nd, 1906, for enlarged glands supposed to be lymphadenoma. The family and previous history was negative of everything, including syphilis. He had had good health till Christmas, 1905, when he noticed lumps in the groins which increased in size and he began to get short of breath on exertion. Then he noticed similar swellings in the neck and axilla but he kept about till a week before admission.

When admitted the patient was obviously very ill, with marked dyspnœa and a husky voice, no pain, but cough and

some expectoration. The pulse was 120, the respirations were 32, and the temperature ranged between 100° and 104° F. Two days after admission he had two rigors. There were great enlargement of the glands in the groins, neck, and axillæ, especially the former, and signs of general bronchitis. The mouth and teeth were in a most filthy condition and there was extensive ulceration of the tongue which might have passed for syphilitic. The mouth bled so readily on being touched that an examination of the larynx was impossible. The weakness, dyspnœa, and swelling of the neck gradually increased and the patient died on March 11th, nine days after admission.

Necropsy.—At the post-mortem examination (which was carried out by Dr. W. E. Reynolds) there was general enlargement of the cervical, mediastinal, mesenteric, and inguinal glands. There were chronic ulceration of the tongue, with leukoplakia, and of the larynx, and some shallow ulcers in the trachea. Both pleural cavities were obliterated by old adhesions, and there was a calcified nodule in each lung. The deep cervical glands were suppurating.

Microscopical and bacteriological examination.—Streptococci were found in abundance in every organ, in the glands and in the ulcers, also in the blood taken post mortem from the right auricle. Beyond the two calcified nodules there was no evidence of tubercle, but the ulceration of the larynx may have been tuberculous. All the glands except those suppurating were in a condition of hyperplasia.

Remarks by Dr. HOBHOUSE.—The interest of this case lies in the fact that a general glandular hyperplasia, closely resembling lymphadenoma from the clinical point of view, was associated with a general streptococcal infection; moreover, streptococci were the only organisms found not only in the glands but also in the tongue and laryngeal ulcers, which were suspected during life and found post mortem.

The question as to what was the exact relation of the various pathological conditions found to one another is a very interesting one. There is no doubt that a glandular hyperplasia, closely resembling lymphadenoma, occurs not infrequently, which becomes tuberculous. If it be not primarily tuberculous, and I am inclined to think that this was the case here, then the streptococcal infection was a terminal one which took place through the septic mouth and tongue. This would account for the cervical glands being the first to suppurate, though the inguinal were the first affected. This seems, on the whole, more probable than that a streptococcal infection would cause general glandular hyperplasia of a not very acute type, with ulceration of the larynx and trachea, and tongue.

Note by Dr. F. G. BUSHNELL, *Pathologist to the Hospital.*—A differential leucocyte count showed polymorphonuclears 73 per cent., large lymphocytes 9 per cent., and small lymphocytes 17 per cent., but the total number of white cells was not estimated.

A full examination of the marrow from the ribs and sternum, of the pus from the cervical glands, of the heart blood, the tongue, laryngeal ulcers, lymph glands, and viscera was made and the details are as follows.

Marrow films of the ribs and sternum showed many normoblasts, polynuclears, eosinophile and neutrophile myelocytes, and lymphocytes. The femur, sawn longitudinally, showed a fatty marrow consisting chiefly of fat cells and lymphocytes. It was sterile on culture.

Cervical glands.—The pus showed streptococci but no tubercle bacilli were present. Cultures in broth gave streptococci and micrococci in pairs and groups, which were obtained also from the juice of a firm hyperplastic cervical lymph gland.

Heart blood.—The blood obtained post mortem from the right ventricle gave a growth of streptococci.

Tongue.—The papillæ were infiltrated with polymorphonuclear cells and the epidermis was thickened except at one place where it had disappeared, leaving flattened papillæ; the musculature showed chronic interstitial overgrowth with an acute polymorphonuclear exudation. There were masses of streptococci present, even between muscle bundles. No tubercle bacilli were found. Plasma and mast cells were seen.

Larynx.—There were ulcers above each vocal cord, the stratified epithelium had in one place disappeared, and there were dense masses of streptococci with a polymorphonuclear exudate. No tubercle bacilli were found.

Lymph glands.—In the abdominal lymph glands the germ centres could be made out; the vessels were stuffed with erythrocytes and contained lymphocytes and streptococci. The striking features were the large mono-cells present and the increase of the reticulum and the numbers of streptococci. These cells, which were plasma cells, varied in size but were seen about the lymph sinuses and in the reticulum chiefly; they evidently were becoming fibroblasts and appeared to be allied to lymphocytes. Some large ones had three nuclei and many showed mitosis. There were some polymorphonuclear cells and a moderate number of eosinophile leucocytes. There were some very irregular nuclei which might be mitotic or karyolytic. The femoral glands showed similar characters. The lymph sinuses were wide. The cervical glands were acutely inflamed, intensely congested, and the germ centres were indistinct. The reticulum was increased and thickened, there were polymorphonuclear cells and streptococci in numbers in the blood-vessels, and the sinuses were wide. There were many plasma cells present of varying size and there were large mononuclear cells containing dark pigment.

The *spleen* contained many erythrocytes; its Malpighian bodies were small and had red blood cells at the periphery and the lymphocytes were scanty. The pulp contained very large numbers of large and small plasma cells and streptococci and the reticulum was very hyperplastic. The capillaries were blocked with organisms (streptococci). There were some large cells with most irregular twisted nuclei. The plasma cells were forming fibroblasts and some appeared in the blood-vessels. Polynuclears and bizarre nuclei were seen.

Liver.—The capillaries were full of erythrocytes and many leucocytes and streptococci. Glisson's capsule contained many small cells. Slight perihepatitis was present. The outer zone of lobules was flattened.

Kidney.—This contained streptococci and some plasma cells. There were distinct degenerative changes in the epithelium and some interstitial overgrowth between the tubules. No tubercle bacilli were found anywhere, no caseation, and no giant cells.

The feature of this case on microscopical examination was the very general presence of plasma cells in the lymph glands and viscera and their association with streptococci. (Incidentally the sections showed apparently the derivation of plasma cells from blood lymphocytes and further the transition of plasma cells into fibroblasts. This has been observed elsewhere by Mott and Cleland.)

Although I know from experience that the negative results of a prolonged search in viscera for tubercle bacilli do not exclude tuberculosis (e.g., in chronic tuberculosis of the cæcum), yet I am inclined to attribute a streptococcal origin to the gland hyperplasia, in the absence of tubercle bacilli from sections of every gland and tissue examined in this case. In other words, I suggest that there was a subacute plasma cell response to streptococcal infection, comparable somewhat to bubonic plague. The tongue was the seat of a chronic superficial glossitis with ulceration in which were numerous streptococci, and similarly the laryngeal ulcers and all the glands and viscera examined were infected. Suppuration had only occurred in the deep cervical glands. Mallory describes large mononuclear cells (phagocytic) in the mesenteric lymph glands in enterica; I have seen them in lymph glands of cases almost certainly tuberculous in the sinuses and reticulum. Omitting tuberculosis, syphilis, or lymphadenoma as not affording positive evidence, the streptococcus has caused a subacute inflammation comparable in some ways to the phlegmon of the subcutaneous tissues or to the gastritis described by Bernstein and others, though it is usually pyogenic.

AYR COUNTY HOSPITAL.

A CASE OF FRACTURE OF THE BASE OF THE SKULL AND FRACTURE OF THE CLAVICLE.

(Under the care of Dr. W. J. NAISMITH, D.S.O., and Dr. A. YOUNG.)

FOR the notes of the case we are indebted to Dr. J. Allan, late resident medical officer.

A man, aged 27 years, was admitted to Ayr Hospital on July 19th, 1905, as the result of a cycle accident. On admission he was in a practically unconscious state. He could not be roused to answer questions, although he resented when he was pinched. There was bleeding from both ears, the right nostril, and the mouth. There were no external signs of fracture of the skull nor was the head cut at any place. The pupils were equal and moderately dilated. The right clavicle was found to be fractured at its outer third

but there was very little displacement. There was no paralysis of the arms or legs but the sphincters of the bladder and rectum were not under control.

The patient was put on milk for nourishment. An attempt was made to bandage the arm to the side but this made him very restless and he managed to get the bandage off. After two further unsuccessful attempts to fix the arm it was decided to leave it free. The temperature, which was 99·4° F. on admission, rose to 101° during the night. The pulse-rate fell in spite of the rise of temperature, it being 104 per minute when he was admitted and 82 per minute when the temperature was 101°. A few hours later the pulse-rate was 60 per minute and it remained between 50 and 60 during the next ten days. During the five days following admission the temperature never quite came down to the normal line but on two occasions only did it go above 99°. After the fifth day it fell to 98° and thereafter it tended to be just below normal. The patient remained in the comatose state for about 48 hours. After that he could be got to understand what was wanted of him, but he appeared to have lost the power of speech as he never answered but always indicated by signs anything he desired. An attempt was made two days after admission to fix the arm to the side with strapping but this was no more successful than the bandage. The bleeding from the points mentioned got gradually less and four days after admission it had stopped. Control over the sphincters returned about this time. About two days later he was able to speak but he was very confused and could remember nothing of what had happened. A week after admission he had a fit which lasted about three minutes and which was just like an ordinary epileptic seizure. For a few days after this his mental condition remained sluggish but otherwise he appeared much better and he was now having light diet. After August 2nd he improved very rapidly. He was allowed up on the 5th and on first getting up he felt rather giddy. His convalescence had been so rapid that he was discharged on the 9th, which was just three weeks after admission. Recently a letter of inquiry was sent to him to find out his present state. It was ascertained that he resumed work shortly after his discharge from hospital and he did not experience any difficulty in using his right arm. Now, nine months after the accident, he is in perfect health and there have been no bad after-effects.

Remarks by Dr. ALLAN.—The chief point of interest is the fact that the clavicle united with no treatment whatever. The site of the fracture was most fortunate as there was practically no displacement and thus union took place without deformity. There was a good deal of callus thrown out at the time but after-events have proved that this has not affected the usefulness of the arm. Another point of interest is the very rapid convalescence.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Symmetrical Adenomata of the Suprarenal Glands with Atheroma of the Aorta.—Abnormalities Met with in Undescended Testicles of the Horse.

A MEETING of this society was held on May 29th, Dr. P. H. PYE SMITH, the President, being in the chair.

Dr. F. PARKES WEBER read a paper on Symmetrical Adenomata or Nodular Hyperplasia of the Suprarenal Glands and Extreme Sclerosis of the Aorta and Coronary Arteries. The patient, a male, aged 59 years, died suddenly soon after admission for pulmonary emphysema and œdema of the extremities. Very little past history was known. The necropsy showed moderate hypertrophy and much dilatation of the heart, extreme sclerotic changes in both coronary arteries, and degenerative changes in the myocardium, with some ante-mortem thrombus at the apex of one ventricle. The aorta, especially the abdominal aorta, showed excessive sclerotic changes with deposition of calcareous plates. The suprarenal glands weighed together about 19 grammes and each of them showed an oval nodular outgrowth of the cortical substance of about the size and shape of a Muscat grape, measuring 25 × 15 × 15 millimetres. Microscopic examination showed one of these nodules to be a typical suprarenal adenoma or hypertrophic growth of the cortical substance, with the customary fatty degeneration of its cells. Microscopical examination of relatively little affected portions of the aorta showed that the calcareous change was by no means confined to the inner coat. The middle (muscular) coat was extensively involved in the degenerative process and both in the middle and outer coats there were likewise scattered spots of round-cell infiltration. The condition was perhaps comparable to Chiari's "mesaortitis productiva" and to Josué's "experimental atheroma" produced in rabbits by repeated intravenous injection of adrenalin. Josué had likewise drawn attention to the association of aortic atheroma in man with the presence of suprarenal hypertrophy.—The literature of the subject was discussed.

Professor F. HOBDAY read a short paper on the subject of Abnormalities met with in the Undescended Testicles of the Horse. He dealt mainly with the subject from the clinical aspect, illustrating the various peculiarities in size, shape, and condition by means of a large number of actual specimens and photographs. Two of the illustrations demonstrated the complete absence of any testicular tissue at all, whilst two others contained the parasite strongle (strongylus armatus), and a number of others were true teratomata, containing such foreign bodies as molar or incisor teeth, hair, and sebaceous material. One museum specimen weighed ten pounds six ounces. Perhaps the most remarkable of all the specimens exhibited was the testicle of a three-year-old colt with a lipoma in its centre, such a condition never having been brought under observation before either in man or animals. The main object of the paper was to illustrate the comparative aspect of the question by demonstrating practically that the horse is an animal in which it is by no means a rare occurrence for surgeons who make a specialty of the removal of the undescended testicle to meet with extremes of abnormality in shape, size, the presence of teratomata, and in other ways.

The meeting was followed by the annual general meeting for the election of officers and council.

CLINICAL SOCIETY OF LONDON.

Thrombosis in the Abdominal Aorta.—Pulmonary Embolism due to Displacement of a Pulmonary Thrombus.—Acute Dilatation of the Stomach and Intestines.—Annual General Meeting.

A MEETING of this society was held on May 25th, Mr. H. H. CLUTTON, the President, being in the chair.

Dr. FRANCIS H. HAWKINS (Reading) read an account of a case of Thrombosis in the Abdominal Aorta in a female, aged 56 years. When 17 years of age the patient had rheumatic fever and typhoid fever when 30 years of age. She was first seen in 1900, when she complained of pains in the head, giddiness with a feeling of pitching forward, and reeling when walking; also of pains down the right side and across the back. She was not seen again until May, 1904. Four months previously (January, 1904) while standing at work she suddenly felt cramp-like pains in her right leg and subsequently similar pains in her left leg. She went to bed and remained there for one month and afterwards went about as usual but she found that her legs gradually became weaker and ultimately she was unable to walk without assistance. When seen in May she complained of a numb feeling in her legs. She could stand but could not walk without support; both legs were extremely sensitive to touch and deep pressure produced great pain, especially so in the calf of the leg. The knee-jerks were present and the skin of the legs was of a normal colour. No cardiac murmur was heard. On June 4th, quite suddenly, the legs became quite numb, cold, and of a death-like pallor. The lips became blue, the hands cold, and the pulse at the wrist very feeble. No femoral pulse could be felt. An hour later there were severe abdominal pain, vomiting and great abdominal distension, and the patient died. At the necropsy mitral stenosis was found. The femoral and iliac arteries were quite occluded with blood clot and a blood clot was found in the abdominal aorta, extending above the superior mesenteric artery. At the bifurcation of the aorta on the posterior wall a calcareous plate was seen. There were an old infarct in the right kidney and several recent ones in both kidneys. The vessels supplying the intestines were occluded. The intestines were greatly distended and in many areas were almost

black. Dr. Hawkins commented upon the causation of the thrombosis and the paraplegia. He also alluded to the rarity of the condition and the exceptional mode of termination.—Dr. JOHN FAWCETT referred to several cases of thrombosis of the aorta which had been observed at Guy's Hospital and exhibited some of the specimens derived from them. In most of these cases mitral stenosis had been found.—Mr. J. WARRINGTON HAWARD referred to the great frequency with which atheroma of the aorta was found after death and compared this with the rarity of thrombosis. There must, he suggested, have been some blood alteration to account for Dr. Hawkins's case.—Mr. A. E. J. BARKER narrated the case of a woman suffering from heart disease who awoke suddenly with great pain in the legs. Pulsation was absent in both femorals; it returned on the right side but gangrene supervened in the left foot. The left leg was amputated and the vessels were found to be normal. From the suddenness of the onset he concluded that embolism had occurred.—Dr. A. E. GARROD recalled the case of a woman who was admitted into St. Bartholomew's Hospital with numbness of both feet but without abdominal pain. After death a clot was found in the abdominal aorta but it extended only an inch above the bifurcation of the aorta.

Dr. CHARLES R. BOX communicated a series of cases of Pulmonary Embolism due to the displacement of a thrombus from the main trunk of the pulmonary artery. In each instance there was reason to believe that pulmonary thrombosis had first occurred and was later followed by displacement of the clot with the development of the symptoms of pulmonary embolism. The series included cases of cellulitis of the leg, severe burns, typhoid fever, diabetes mellitus, malignant disease of the abdomen, and operations for the radical cure of hernia. Stress was laid upon the importance of recognising the premonitory signs of the condition, such as the development of a murmur at the base of the heart, acceleration of the pulse, and moderate cyanosis associated with dyspnœa. It was pointed out that death might be practically instantaneous when it was usually associated with pallor or delayed when it was accompanied by cyanosis and asphyxia. Infarction of the lung was exceptional. The prophylaxis and treatment of the condition were briefly summarised and the possible danger of artificial respiration in further dislodging the clot was mentioned.—The PRESIDENT remarked on the comparative rarity of this dangerous condition. The treatment usually adopted by surgeons was the hypodermic injection of strychnine (ten minims repeated every half hour if necessary) and he referred to a case which recovered under these means.—Mr. W. G. SPENCER believed that pulmonary embolism was one of the chief causes of death after operations for the radical cure of hernia, on which account such patients should not be allowed to get up too soon. The length of the clot in some of Dr. BOX's cases indicated that it had been some time in forming and this suggested that it might have been formed in the veins. The clot could not have formed in the pulmonary system without symptoms and he referred to a case where it seemed probable that the clot had formed in the internal saphena.—Dr. GEORGE EASTES also referred to a case in which the point of origin appeared to be in the leg. In one case which he had observed the clot found in the pulmonary artery was a perfect cast of the femoral vein.—Dr. H. H. TOOTH referred to the large number of conditions with which pulmonary embolism might be associated and mentioned cases of pneumonia and enteric fever so complicated. In the latter case a coiled-up mass of loosely attached clot in the pulmonary artery was unravelled and then appeared to be a cast of the vena cava and iliacs.—Dr. A. E. T. LONGHURST referred to the use of ammonia as suggested by the late Sir B. W. Richardson.—Dr. A. E. RUSSELL believed that such cases would be found more frequently if greater care were taken in the removal of the thoracic viscera post mortem. He believed that some cases of pulmonary embolism recovered and instanced a case which presented all the symptoms of pulmonary embolism after an operation for femoral hernia and which recovered. He suggested morphine and oxygen inhalation for their treatment.—Mr. G. H. MAKINS endorsed the views of those who believed that the thrombus formed in the peripheral vessels and instanced cases following fractured femur.—Dr. BOX, in reply, maintained that in some cases at any rate the thrombus formed in the pulmonary artery, though in others it might be formed in the periphery. It was of the highest importance not to perform artificial respiration; alcohol and ammonia were contra-indicated, but citrates should be given immediately premonitory symptoms were observed.

Dr. F. PARKES WEBER read a paper on a case of Acute Dilatation (Acute Atony) of the Stomach and Intestines connected with pneumonia and pleuro-pericarditis. The patient was a debilitated and delicate-looking young woman, aged 21 years, who was admitted to the German Hospital on about the third day of an attack of pleuro-pneumonia. Since an illness (diphtheria?) six weeks previously she had developed a tendency to belch up wind. Just before admission she had been able to eat nothing but after admission she took a good deal of food and at the same time lost the power of bringing up wind; this probably marked the commencement of the gastro-intestinal muscular atony and acute distension followed. Great relief resulted from lavage of the stomach but the meteorism did not immediately subside, showing that the intestines as well as the stomach were involved. Afterwards for some time pericardial friction could be heard but the progress of the case was ultimately satisfactory. Three out of the 44 cases of acute dilatation of the stomach collected by Dr. H. Campbell Thomson were connected with pleurisy and pneumonia. The present case ought perhaps rather to be termed "acute atonic gastro-intestinal tympanites." Dr. Weber alluded to the analogy between "acute dilatation of the stomach," "ballooning of the rectum," "paralysis of the non-gravid uterus," and "acute atony of the urinary bladder during operations," all of these conditions being temporary states of atony in hollow muscular viscera. Studies on the innervation of the viscera had already helped to elucidate some of the conditions.—Dr. FAWCETT did not quite see the analogy between the uterus and the stomach. He preferred the use of the term "paralytic" to "atonic" dilatation.—Dr. BOX believed that in the fulminating form of dilatation the mechanical obstruction caused by the folding of the stomach upon the duodenum was an important factor; it was often extremely difficult to decide whether the stomach or the colon was the chief seat of dilatation.—Dr. NORMAN DALTON believed that gastric and intestinal dilatation might be purely toxic in origin and referred to a case by way of illustration.—Dr. WEBER replied.

The annual general meeting of the society was then held and after the report by the council and the treasurer had been received and adopted the following gentlemen were elected to hold office during the year 1906–07:—President: Mr. H. H. Clutton. Vice-Presidents: Mr. Clinton T. Dent, Dr. William Ewart, Mr. John R. Lunn, Mr. G. H. Makins, Dr. William Pasteur, Mr. C. J. Symonds, and Dr. William Hale White. Treasurer: Mr. G. H. Makins. Council: Mr. Anthony A. Bowlby, Dr. W. H. B. Brook, Dr. Harry Campbell, Mr. Albert Carless, Dr. Norman Dalton, Dr. H. Morley Fletcher, Sir Alfred Fripp, Dr. E. W. Goodall, Dr. L. G. Guthrie, Mr. J. Ernest Lane, Mr. B. G. A. Moynihan, Mr. T. H. Openshaw, Dr. F. J. Smith, Mr. F. J. Steward, Dr. G. A. Sutherland, Dr. H. H. Tooth, Mr. A. H. Tubby, Dr. H. G. Turney, Mr. H. F. Waterhouse, and Dr. Claude Wilson. Honorary Secretaries: Mr. W. G. Spencer and Dr. Archibald E. Garrod.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on May 18th, Dr. J. F. W. Tatham, the President, being in the chair.—Professor Rubert W. Boyce read a paper on the Outbreak of Yellow Fever in New Orleans in the Autumn of 1905, a remarkable feature of which was the unanimity with which all classes of the community accepted without hesitation the latest conclusions of science with regard to the etiology of the disease and acted on them with the most brilliant results. But at the International Congress of Medicine at Lisbon he met men from parts of Central America where the disease was endemic and he was astonished at the apathy and indifference which they displayed. The present procedures for combating the pestilence were based on the extraordinary success achieved in the campaign inaugurated in June, 1900, by Major W. C. Gorgas, Dr. Walter Reed, Dr. Jesse W. Lazear, Dr. Carroll, and Dr. A. Agramonte at the time of the occupation of Cuba by the American troops under General Wood, himself in practice as a physician prior to the war. Public attention had been drawn to the recent discovery by Major R. Ross, confirmed by Grassi, the brothers Plehn in Africa, and others, of the true cause of malaria, in the transmission by mosquitoes of the genus anopheles of the hæmamœba to which its original discoverer Laveran had given the name of plasmodium, and it suggested to these observers a like explanation of the causation of yellow fever. They soon proved that the carrier of this disease was a mosquito

of the genus stegomyia, and so far as they knew of one species only—stegomyia fasciata—though Dr. Carlos J. Finlay of Havana had 20 years previously insisted on some close connexion between mosquitoes and yellow fever. The Liverpool School of Tropical Medicine sent an expedition to Para, the Germans and French sent others to Rio, Dr. Ziceaga, chief of the board of health of Mexico, took up the question in that country, and the Government of the United States sent commissions to New Orleans and Havana. Such coöperation was unprecedented but the solution of the problem was achieved at Havana, where Colonel Gorgas succeeded in ridding the city of the fever which for two centuries had never been absent, while the disease was still raging at New Orleans. The stegomyia, called by the Americans the tiger gnat from its peculiar stripes, and with lyre-like marking on the back of its thorax, was distributed throughout the tropics, especially in Central and South America and in most parts of Africa. It had been found as far north as Spain and Italy and in parts of Australia. Its favourite habitats were along the coast line but it everywhere followed the routes of trade, rivers, and railways, even to elevations of 4000 feet—in fact, wherever it was carried by man, being as domestic as the flea and the bug. It contrasted strongly with the anopheles of malaria, breeding in cisterns and puddles in yards, in empty cans, &c. In the absence of these it might avail itself of drains, but rarely, if ever, was it found in ponds and marshes or natural collections of water, the favourite haunts of anopheles, which made its extermination much easier. A "mosquito survey" of New Orleans and of Belize showed in each the prevalence of the anopheles in the low lands along the lagoons and of the stegomyia in the city and especially in the poorest and most densely peopled quarters, the districts, the malarial, and the yellow fevers being distributed in like manner. The struggle with yellow fever as an epidemic was greatly facilitated, not only by the domesticity of the stegomyia but by the short time during which the patient was infective—viz., the three or at most four days following the appearance of the fever. If during these days healthy stegomyiæ could be kept from biting him the disease would cease with the death of the last mosquito of that generation. Between the infection of the patient and the invasion of the fever there was an incubation of five days, then three days only of infectivity, though convalescence might not begin for several days longer; the mosquito became infected by biting the patient during the first three days of his illness, but the parasites were incapable of transference to the human body until they had undergone further metamorphoses which occupied 10 or 12 days and it was clear that during that time much might be done in exterminating the infected but not yet infective insects. After infection the mosquitoes lived and remained actively infective for as long as ten weeks; indeed, in the shelter of a ship's hold the time might be more, but when the temperature fell below 70° F. they became inactive and below 60° they slowly died. Unlike those of the malarial fever the parasites had not yet been detected, being of such extreme minuteness as in one stage of their life cycle to pass through a Pasteur filter. The great question now was whether they could pass into the ova of the mosquito, so that a second generation would be infective as was the case with some of the tick-borne diseases. Old practices and traditions died hard but the destruction of ballast was useless as was quarantine as formerly carried out. In many places dredging was still prohibited as if the fever were caused by "miasmata" and at Belize the authorities had gone to the wholly needless expense of a separate cemetery, mortuary, &c., for yellow fever, whereas it could not be too strongly insisted on that neither the living man nor the cadaver, his evacuations or vomit, or clothing, bedding, or furniture contained any element of danger. Prevention consisted solely in keeping healthy stegomyiæ from biting the sick and infected ones from biting the healthy. This was to be effected by abolishing all accidental and unnecessary collections of water, covering others with a film of oil for one season, and having all cisterns permanently covered with copper wire gauze though canvas might be allowed as a temporary substitute. Early notification was essential to success but local authorities, fearing that the trade of a place might suffer, were slow to admit the presence of such diseases, and the public must be educated to a sense of their true interests. Diagnosis in the early stages was difficult since the disease often took a mild form in natives and children, newcomers and strangers being attacked as a rule more severely. Malaria, dengue, and influenza were easily confused with these. In New Orleans there had been 100 cases before the first notification. There they improvised a hospital but it was better to educate the poor to the use and advantages of hospital treatment at other times. The one essential element in treatment was absolute segregation of the patient during the infective period and preventing the escape from the room of infected mosquitoes. Every door, window, and aperture should be securely screened with gauze and the patient's bed in like manner. Such measures could be carried out in hospitals as they rarely could in private houses, and in hospitals all doors should be double or the mosquitoes would inevitably escape. While the breeding places were secured the adult insects must be destroyed by sulphur or formaldehyde fumigations carried out with the utmost thoroughness, to insure which every aperture or crevice must be sealed with paper and paste. For the fumigation of rooms occupied by the sick pyrethrum was recommended, the mosquitoes, which were not killed but stupefied only, being swept up and burnt. In New Orleans 70,000 cisterns were screened within ten days. A large hospital was improvised, every house where a suspicious case had occurred was fumigated, as was the large fruit market through its whole extent, the sheds having been previously closed with tarpaulins, paper, and paste. The cost of the operations amounted to £60,000 but the epidemic steadily declined and for the first time in history ceased before the advent of the frosts.—Sir Patrick Manson maintained that the alleged immunity of different races to certain diseases always broke down on examination. The exemption was a local phenomenon and negroes coming from outside the zone of endemicity were as susceptible as whites; indeed, this apparent immunity was not peculiar to the native blacks or even creoles, but was shared by natives of European descent. Was it a matter of acclimatisation or had the natives become immune through having had mild attacks in early life? He thought that stamping out the disease would have the effect of giving a future generation of highly susceptible persons instead of the present half-protected race and he wanted to know whether these efforts had made any appreciable reduction in the number of mosquitoes.—Major R. Ross said that with the myriads of eggs laid by mosquitoes reduction could not be hoped for save in islands where extermination was possible, but a mosquito disease was reduced as the square of the reduction of the mosquitoes. Sewerage was of no avail but a water service without domestic cisterns was a great advance and had been adopted in Panama.—Dr. F. E. Fremantle remarked that if the carriers of a disease were exterminated the disease would disappear. It was, however, the reduction in, and disappearance of, infected mosquitoes rather than of mosquitoes as such that was aimed at. He would like to know more of the constitution of the United States Marine Hospital Service. He was at San Francisco when yellow fever broke out; the Mayor denied it, dismissed the sanitary officials, and dissolved the board of health which had asserted the presence of yellow fever in the city. But on an appeal to the central authority a strong body of this corps was sent down who verified the statement of the former board and reinstated it and its work.—Major W. G. Macpherson failed to see in the curve of the New Orleans epidemic any such evidence of striking success as Professor Boyce did; in fact, it closely resembled those which he had been recently studying of the behaviour of yellow fever in Gibraltar in the early and middle decades of the nineteenth century while its etiology was still unknown.—After some remarks by Dr. L. C. Parkes and Dr. H. T. Bulstrode, Professor Boyce replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—A meeting of the Section of Anatomy and Physiology was held on April 27th, Professor A. Fraser being in the chair.—Professor D. J. Coffey exhibited a series of slides which illustrated the development of fat in a young animal.—A discussion followed, in which Professor T. H. Milroy and Dr. R. J. Rowlette took part.—Professor Johnson Symington showed two specimens in which, after careful hardening of the parts in formalin, the base of the skull had been removed piecemeal, so as to exhibit the cranial dura mater from below. The relationships of the cranial nerves, of the Gasserian ganglion, and several other points were clearly brought out.—Professor Fraser spoke of similar specimens which he had himself prepared before the introduction of formalin, after injection of chloride of zinc solution.—Professor Milroy described a method of staining portions of the

central nervous system in bulk with thionin. The series of slides which he exhibited clearly demonstrated the success of the method.——A meeting of the Section of Pathology was held on May 4th, Dr. Joseph F. O'Carroll, the President, being in the chair.—Dr. F. C. Purser exhibited the Organs from a case of Cancer of the Head of the Pancreas. The patient, a man, aged 57 years, complained of pain in the abdomen, especially in the region of the umbilicus, and gave a history of syphilis, jaundice, and great emaciation. The heart was normal as regarded the position of the apex beat. No murmur was heard. The patient developed sensory aphasia and hemiplegia of the right side, due to an embolus lodged in the cortical branches of the middle cerebral artery, and died on April 2nd. A large thrombus was found in the left ventricle and there were well-marked vegetations on the aortic valves.—Professor O'Sullivan showed a specimen of Unusual Degeneration of the Liver obtained from a middle-aged man who had had two attacks of jaundice. He was under the care of Dr. Walter G. Smith and Sir Charles B. Ball. The latter operated and found the common bile duct and gall bladder perfectly empty. There was no evidence of obstruction or of bile to be seen anywhere. The liver weighed four pounds five ounces, was larger than normal, was of a greenish-yellow colour, and its capsule was smooth. On section it showed greenish-yellow areas separated by lines of red material. Microscopical examination showed that the centre of the lobule was degenerated and a zone of comparatively healthy liver cells was to be seen towards the periphery. There were no inflammation of the smaller bile ducts and no sign of increased connective tissue formation. No bacteria were found. Sections which had been stained with osmic acid had partly failed owing to the imperfect penetration of the acid, but even in the imperfect sections obtained the presence of fat was quite discernible.—Dr. H. C. Mooney exhibited a specimen (with culture) of Aspergillus Fumigatus in the Eye, caused by an oat husk sticking on the cornea of an agricultural labourer. After the cautery was applied the patient recovered. Only 16 or 17 cases of the kind have been recorded, two of which occurred in the United Kingdom.—Professor E. J. McWeeney said that he had seen aspergillus fumigatus occurring in the auditory meatus.—Dr. Mooney described Mr. Priestley Smith's new Method of Preserving Eyes for Museum purposes and demonstrated its advantage over the older processes in which gelatin and gelatin and formalin were used.—Professor McWeeney described the details of Bacterial Association in a case of Spreading Emphysematous Gangrene. The patient was a male, aged 18 years, admitted under the care of Mr. John S. McArdle to St. Vincent's Hospital, Dublin, suffering from compound fracture of the right humerus, the result of a hunting accident. He was unconscious, and within four hours of the accident the temperature rose to 108° F., evidently from shock to the medulla. Despite careful cleansing and replacement of the bones the arm became swollen and glazed after 24 hours, sero-sanguineous discharge came on, which became fœtid, the limb became dark and brawny, and emphysema occurred round the shoulder-joint. Owing to the cerebral condition amputation was out of the question. Free opening of the cellular spaces of the arm gave issue to the fluid, which was examined. The side of the chest and neck became emphysematous and death occurred in four days after the receipt of the injury. Bacteriological examination by anaerobic agar-plates in a Bulloch's apparatus yielded three organisms. One was a streptococcus and one was a bacillus resembling bacillus coli; the third was the bacillus aerogenes capsulatus of Welch and Nuttall, a large, anthrax-like, motionless rod with rounded ends, staining well by Gram's method and not showing obvious spore-formation though it must have been present. There was much gas formation. A rabbit injected intravenously with one cubic centimetre of the broth culture and then killed, and the body kept warm overnight, showed enormous distension of the solid viscera with gas bubbles ("foaming" organs). The gas had a slight odour of rancid butter. Cultures and microscopical preparations of all three organisms were demonstrated.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on May 4th, Mr. Charters J. Symonds, the President, being in the chair.—Dr. H. J. Davis exhibited three patients, members of one family, who were all the subjects of Syphilis communicated by oral infection from one to the other. The first to develop syphilis was a child, aged 11 years. There was no evidence of genital infection. The patient was first seen on account of a dusky, macular eruption on the arms, the legs, and the body; there were tonsillitis and severe adenitis with enlarged glands in the neck and groin; there was no appearance of a primary sore. The child's grandmother, a widow for many years, nursed and slept with the child during her illness. She became ill with tonsillitis, adenitis, and a typical rash and early iritis. There was no evidence in her case of any primary sore. The third member of the family was the child's aunt, who was inhabiting the same house as the child and her grandmother, and developed a chancre inside the right nostril. When exhibited the patient presented mucous patches on the tonsils, early roseola, and the primary sore could be seen at the junction of the skin and mucous membrane of the right nostril.—Dr. D. R. Paterson exhibited a Fish-hook removed from the Œsophagus and also a Tooth-plate which had been swallowed during sleep and had become lodged opposite the suprasternal notch.—Dr. Paterson also showed a skiagram of the neck in a case where a piece of meat was impacted in a Stricture of the Gullet. The cases illustrated how such foreign bodies could be removed with instruments of precision and also the necessity for discouraging the indiscriminate use of coin-catchers and probangs.—Dr. Paterson also exhibited a case of Left Recurrent Paralysis and Paralysis of the Soft Palate, associated with Middle-ear Disease and Facial Palsy on the same side.—Dr. L. H. Pegler exhibited a patient with Bilateral Ulceration of the Posterior Segments of the Vocal Cords.—The opinions expressed were in favour of it being a case of pachydermia laryngis.—Dr. Herbert Tilley exhibited four cases of Chronic Frontal Empyemata operated on by a simplified Killian operation.—Mr. H. Clayton Fox showed a case of Tuberculosis of the Soft Palate, the Pharynx, and the Epiglottis.—Cases were also shown by Mr. Charles A. Parker and Dr. J. Dundas Grant.

Reviews and Notices of Books.

Physical Diagnosis. By RICHARD C. CABOT, M.D., Instructor in Medicine in Harvard University. Third edition, revised and enlarged. With five plates and 240 figures in the text. London: Baillière, Tindall, and Cox. 1906. Pp. 578. Price 15*s*.

IN writing this book the object of the author has been to present an account of the diagnostic methods and processes which are needed by medical practitioners. Dr. Cabot has only introduced those methods of examination with which he himself is perfectly familiar and he has given no space to the description of tests which he believes to be useless. Whilst taking the early lessons in the physical examination of cases the student is frequently bewildered by the immense number of new facts which are constantly being brought under his notice and he requires some text-book to which he may refer to assist him in understanding the instructions which are given to him in the wards and the out-patients' rooms. Practical medicine can only be learned, it is true, by actual attendance at the hospital but a written guide is of great assistance. Dr. Cabot has succeeded in writing a work which will be found very serviceable in this respect to the junior student. The descriptions and instructions are given briefly but plainly and numerous useful hints are offered as to the mode in which physical examination should be carried out. The present edition has been thoroughly revised and in it are duly described the more recent processes which have been introduced to assist diagnosis.

The examination of the blood, more particularly in reference to the differentiation of the various forms of leucocytes, naturally receives much attention and Dr. Cabot's remarks on the interpretation of the results of the leucocyte count and differential count are well worthy of notice. After a description of the polynuclears, lymphocytes, eosinophiles, and mast cells he suggests the following definitions: leucocytosis is an increase in the polynuclear cells beyond the

normal—7000; lymphocytosis is an increase of lymphocytes beyond the normal upper limit—3500; eosinophilia is an increase of eosinophiles beyond the normal upper limit—500 per cubic millimetre. This forms a useful standard for ordinary clinical work; should any variety be present that fact can be duly recorded.

The value of the book is considerably increased by the admirable and numerous illustrations which it contains; the student will find them of great assistance in connexion with the various descriptions and instructions which are given in the letterpress. We believe that this book will prove most useful as an adjunct to practical work.

The Zoological Society of London: A Sketch of its Foundation and Development and the Story of its Farm, Museum, Gardens, Menagerie, and Library. By HENRY SCHERREN, F.Z.S. London: Cassell and Co. 1905. Pp. 252, 50 plates, and nine plans. Price 30*s*.

THE author of this volume, Mr. Scherren, is favourably known as the writer of more than one admirable book upon popular natural history and as the compiler of a short history of the Zoological Society issued not long since. The present work is an expansion of that "short history" with the addition of a number of finely executed plates illustrating not only the society's menagerie as it is to-day and as it was in past years but also a selection of interesting beasts and birds exhibited alive therein.

In a painstaking way the author recounts the doings of year after year and fairly divides his pages into records of the scientific progress of the society and events at the gardens. He is always clear and accurate in statement and we have been unable to detect any error of fact. The book may therefore be recommended as an epitome of the 80 years of existence of the Zoological Society. Recently, as everyone knows, a considerable effervescence occurred, which brought prominently before the Fellows and the public rival views as to the conduct of affairs and the position which the society ought to occupy. It is plain from not infrequent and marked aposiopeses on which side Mr. Scherren ranged himself during those troublous times. The book, however, is by no means entirely one-sided but it would have been, we think, as well to have avoided altogether controversial matters, for, indeed, the author admits that a great deal of the recent opposition to the administration of the society was due to sentimentality and personal hostilities. Though Mr. Scherren avoids any strong and repeated attacks upon the late administration of the society, enough remains to flavour his book with partisanship. And it is therefore impossible to notice this history of the Zoological Society without pointing out that Mr. Scherren concentrates blame which should have been more widely distributed, and that the present government of the society, though it has achieved meritorious results, has not yet effected a beneficent revolution at all comparable to that of the "sixties" and "seventies" which years were in our opinion the most noteworthy of any in the history of the Zoological Society. In so far as he does definitely allude to the late troubles Mr. Scherren adopts a rather curious attitude towards the management of the society. A regrettable incident occurred in 1904 with regard to a fine example of the rare Grevy's zebra. The stallion died three days after being partly "broken in," though the *propter hoc* did not appear to be certain from the post-mortem examination. "Since then," remarks the author, "nothing has been done to utilize the zebra stock for draught, saddle, or parade." After a perfectly fair balancing of the "wisdom or unwisdom" of making such experiments the author concludes with the statement that "anything was better than the old policy of 'masterly inactivity.'" That is in plain English it is better to kill a valuable animal, worth perhaps £500, than to leave it peacefully grazing in its paddock! The present administration, with whom Mr. Scherren appears to be in sympathy, might well exclaim, "Save us from our friend."

A glance over the history of the society as detailed by Mr. Scherren shows that the present administration succeeded to an excellent heritage. Since 1896 there has been a gradual increase in the number of visitors to the gardens. To have maintained this increase is of course quite praiseworthy but annual fluctuations appear to us to depend largely upon the weather. The increase in the number of Fellows, though noteworthy in 1905, shows nothing remarkable. For the year 1905, which is not included by Mr. Scherren, the net increase of the Fellows was 145, a greater increase than in any given year during the last ten. If, however, we go back to the "sixties" we find that in four consecutive years, 1865 to 1868, the net increase of Fellows was 225, 316, 243, and 222. We may hope to see the new management rival or excel these figures. The object of the Zoological Society of London is not, however, to cater for the amusement of the public. It was founded for the purpose of exhibiting living animals and for the advancement of zoological science. Incidentally the society possesses a valuable money-making asset in the gardens and it is obvious that this source of income must be carefully tended. The statistics given by Mr. Scherren hardly offer hope of a very great alteration in the number of paying visitors. The council would therefore do well to attend more particularly to the needs of the Fellows with a view of increasing the number of persons contributing a steady income to the society. The members have before them the successful efforts of the past administration and it would be well to inquire into the causes which produced so continuous an increase in earlier years.

LIBRARY TABLE.

Practical Manual of Diseases of Women and Uterine Therapeutics. By H. MACNAUGHTON JONES, M.D., M.Ch. R.U.I. Ninth edition. University Series. London: Baillière, Tindall, and Cox. Pp. xxxviii. — 1044. With 637 illustrations and 122 plates. Demy 8vo. 1905. Price 21*s*. net.—In the ninth edition of this well-known book much material has been added and the whole work has practically been rewritten. The author states in his preface that he has never aimed at placing in the hands of students or practitioners a superficial or sketchy summary of the subject of gynæcology. Certainly no one could call this work either sketchy or superficial. It now extends to some 1044 pages and contains 122 plates and 637 illustrations. Its title, a Practical Manual, is not, we think, quite apt; it should rightly be called, as, indeed, the author terms it himself, a digest of practice. The book contains excerpts or actual quotations of almost every important paper which has been published of late years and a good many extracts of relatively unimportant papers. Still, it is avowedly written for the specialist, who is in a position to pick the good from the bad, and therefore the fact that he receives very little help in this from the author is of little moment. The principal defect of the work is the want of any critical analysis of the immense amount of material which it contains. We have called attention in our reviews of former editions to the absence of orderly arrangement in this work and this fault has not been entirely remedied in the present edition. There is much of value but also a certain amount of unnecessary detail which detracts from the excellence of the whole.

The Universal Kinship. By J. HOWARD MOORE, Instructor in Zoology, Crane Manual Training High School, Chicago. London: George Bell and Sons. 1906. Pp. x. — 329. Price 4*s*. 6*d*. net.—The object of this book is to enforce the "kinship of all the inhabitants of the planet earth,"

meaning by this the genetic relationship of all living animals, including man, and to draw certain moral conclusions from this principle. The author fears that "this thesis comes pretty squarely in conflict with widely-practised and highly-prized sins," and that his work will therefore meet with criticism or neglect. There is, however, as he tells us in italics, a future, and what he thinks now the world will think hereafter. The modesty of this preface must not deter the reader from a study of the book which has many good, and some bad, points. The first section sets forth the arguments drawn from anatomy and embryology which go to prove the evolutionary origin of mankind. These are clearly stated but we cannot but feel that a few illustrations would have been of assistance to those who are not already acquainted with the elements of biology. The second section deals with the psychical phenomena of man and animals and contains much interesting material, culled from many sources, illustrating the mental processes of a variety of animals. The interpretation of the actions of creatures so different from ourselves involves perhaps greater difficulties than the author would admit but on the whole he appears to make out a good case for thinking that the rudiments of most, if not all, of the human faculties are exhibited by lower species. The third and concluding section of the book treats of the ethical principles which result from an appreciation of the relationship of man to the lower animals. We must treat not only our neighbour—our fellow man—as we would wish to be treated ourselves but we must apply this rule to all living things. Hence we must become vegetarians and must abjure all forms of sport. Whether these conclusions are right or wrong we are not concerned here to discuss; it is, however, difficult to see how they necessarily follow from the author's premisses. We are faced by the usual difficulty inherent in all purely materialistic systems, that conceptions of right and duty have no secure foundations on such a basis. We are even entitled to argue that as the lower animals eat each other and sometimes man, he is justified in eating them. The style of the book is calculated to jar somewhat on the nerves of the fastidious reader, exhibiting, as it does, that tendency to attempts at fine writing which we associate rather with American books than with the more arid productions of this country. Such a sentence as "the atmospheres which to-day drive their fleecy flocks over the azure meads of heaven and float sweet sounds and feathered forms" seems an unnecessary periphrasis for the air, while to speak of the rich collectively as "hellish" appears merely vulgar. Those who can overlook such blemishes will find much to interest them in those parts of the book in which the author is concerned with facts and observations rather than with opinions founded on them.

The Treatment of Gonorrhœa in the Male. By CHARLES LEEDHAM-GREEN, M.B. Heidelb., F.R.C.S. Eng., Senior Surgeon to Out-patients, Queen's Hospital, Birmingham; and Assistant Lecturer on Bacteriology, University of Birmingham. London: Baillière, Tindall, and Cox. 1906. Demy 8vo, pp. 151. Price 5*s.*—In these pages Mr. Leedham-Green endeavours to give a concise yet detailed account of the modern views of the pathology and the treatment of gonorrhœa, with a view to assist students and practitioners to whom the foreign literature and the scattered papers on the subject in British periodicals are difficult of access. On the continent several important monographs have recently been published on the subject and the author is indebted to the writings of Guyon, Jodassohn, Kollmann, Oberländer, Wossidlo, and von Zeissl, as well as to those of Finger of Vienna and Casper of Berlin. Mr. Leedham-Green deals with the chief complications of the disease in several chapters but he does not attempt to write either of stricture or of gonorrhœal conjunctivitis. In his second chapter the author gives, somewhat fully, Finger's view on the closing of the bladder which has been largely adopted; we note, however, that he thinks that the internal prostatic sphincter plays a far more important part than that with which Finger and Guyon credit it. The chapters on treatment are valuable and the author acts wisely in pointing out the wrong which is often done to a patient by "taking a blind shot." As he says, to treat the disease rationally it is necessary to determine (1) whether it is a case of gonorrhœa or pseudo-gonorrhœa; (2) the stage of the disorder; (3) the extent to which the mucous membrane is affected; and (4) the presence or absence of complications. It is only when all these particulars have been ascertained that the medical man is in a position to prescribe for the patient with precision. The author thinks that copaiba possesses no advantages over sandal-wood oil, while it is irritating to the stomach and to the kidneys. When discussing the question of the signs by which it can be determined whether the disease is cured, Mr. Leedham-Green writes: "So long as the 'threads' show the presence of gonococci, even occasionally, the disease is not cured. The patient is infectious and the treatment must be continued. Even if pus cells are constantly to be seen in the 'threads,' it is most probable that the gonococcus still lurks somewhere in the urethra." Part III. is devoted to the proof of the cure of gonorrhœa and its bearing on marriage. The author says that it must be frankly confessed that there are certain cases which it is not in our power thoroughly to cure—where the deeper structures of the urethra, and more especially the prostatic glands, are profoundly affected. The various questions which arise in connexion with this disease are carefully and clearly discussed and the author is to be congratulated on the production of a helpful volume.

Report of the Plague Research Laboratory for the Official Year ending March 31st, 1905. By Lieutenant-Colonel W. B. BANNERMAN, M.D., B.Sc.Edin., F.R.S.Edin., I.M.S., Director of the Laboratory. Bombay: Government Central Press. 1906. Pp. 18. Price 10 annas, or 11*d.*—This report shows the admirable work which has been done in the Plague Research Laboratory, Parel, during the year ending March 31st, 1905. No less than 129,507 doses of plague prophylactic vaccine were manufactured and issued from the laboratory. Since the occurrence of the Malkowal disaster in 1902 it has been an invariable practice to add 0·5 per cent. carbolic acid, thus obviating any danger from tetanus. The report deals with the subject of enriching the prophylactic vaccine and shows that this method is not so effective as the old standard method. Again, the germs used as seed material are now invariably as virulent as possible, whilst the manufacture of the bouillon is carried out on an improved plan. Captain W. G. Liston, I.M.S., has evolved by a modification of Wright's method a means of standardising the vaccine. Various other important points are dealt with, amongst which it may be mentioned that it was determined that, as regards India and Natal at least, the common domestic animals were found to be insusceptible to plague, a conclusion opposed to that enunciated by Professor W. J. Simpson.

The British Woodlice. By WILFRED MARK WEBB, F.L.S., and CHARLES SILLEM. London: Duckworth and Co. 1906. Pp. 54 and 26 full-page plates. Price 6*s.*—Woodlice are well-known examples of the smaller creatures found in gardens and on damp soils generally. Zoologically they are classified as land crustaceans belonging to the order isopoda. The British species are not numerous and are popularly designated by a variety of more or less uncouth local and vernacular names. Mr. Webb and Mr. Sillem in the present treatise enumerate 12 genera and 25 species, each of which is fully described in the text and illustrated in finely executed plates considerably larger than the natural size. The woodlice possess some medical interest of an antiquarian kind

from the fact that up to about 150 years ago one or more of the genera were, under the name of hoglice, prescribed for "scrofulous" diseases and obstruction of various abdominal organs, and the pharmacopœia sanctioned by the Royal College of Physicians of London of those days contained directions for preparing them. Mr. Webb and Mr. Sillem identify the hoglouse with the creature now known as armadillidium vulgare. Some further references to the medicinal uses of hoglice will be found in the "Animal Simples" of Dr. W. T. Fernie, a review of which appeared in THE LANCET of May 27th, 1899.

JOURNALS AND MAGAZINES.

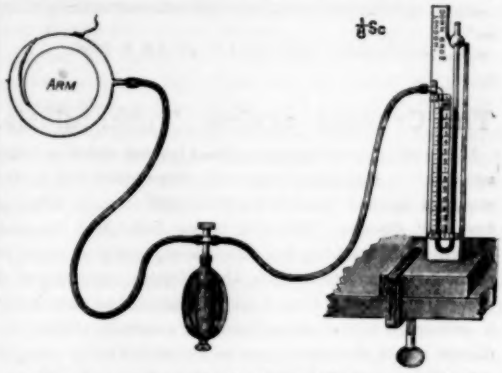
The Philippine Journal of Science. Edited by PAUL C. FREER, M.D., Ph.D. Published by the Bureau of Science of the Government of the Philippine Islands. Vol. I., No. 1. January, 1906. Pp. 113.—This volume contains interesting articles on the Cocoanut Palm; on the Occurrence of the Schistosoma Japonicum vel Cattoi in the Philippine Islands; and concludes with a valuable study of some tropical ulcerations of the skin with particular reference to their etiology, by Richard P. Strong. In this section of the transactions the student of tropical medicine will find a most exhaustive summary of the etiology of Delhi sore or boil, in which the whole of the previous literature of the subject is collated and summarised. The nature and the relationship of the bodies encountered in Oriental sore are succinctly considered and the question of the identity or otherwise of the parasites found in Delhi sore, kala-azar, and tropical splenomegaly is critically discussed. The author, in addition, describes a number of forms of chronic ulceration of the skin encountered in Manila, among which (after excluding certain ulcerative lesions of syphilis, yaws, leprosy, and lupus) there still exist at least several types of different etiology. The volume is illustrated by some excellent photographic plates.

Man.—Dr. C. G. Seligmann contributes to the May number of *Man* some account of the Tugere tribe in Dutch New Guinea and the article is illustrated with portraits of three Merauke men and four women reproduced from photographs taken by Captain G. W. C. Pim. Dr. Seligmann believes them to be "the first authenticated photographs of these interesting savages that have been published." He says that the Tugere raiders and the Merauke folk are one people and that they in many respects resemble the Toro of the Bensbach River met by the members of the Daniels Ethnographical Expedition in 1904. There are two large Tugere drums in the British Museum. Our readers will recollect that various other portraits of aborigines of New Guinea accompanied Dr. Seligmann's Hunterian lectures which were delivered before the Royal College of Surgeons of England and published in THE LANCET of Feb. 17th and 24th, 1906.

New Inventions.

AN IMPROVED SPHYGMOMETER.

AFTER considerable experience with sphygmometers I find the form here illustrated (an improvement on the pattern introduced by Dr. C. J. Martin) to be the most convenient and one that gives very accurate results. The apparatus consists of a bag of thin indiarubber $\frac{1}{16}$th of an inch in thickness, 13½ inches long, and 4½ inches broad. It has an inelastic outer covering. Into the centre of one side of the bag a brass nozzle is secured by a screw and washer, as in the connexion of a valve tube of a bicycle tyre. This bag is wrapped round the arm over the biceps, so that the ends overlap. The interior of the bag communicates by a flexible indiarubber tube with a four-way piece of brass. This junction is in communication on the one hand with a mercury manometer and on the other with an indiarubber ball. The tube connecting with the ball contains a valve. The fourth way of the junction is closed by a screw and leather washer, by loosening which the air in the system may be allowed to leak out. The manometer is of the ordinary U-tube variety, 11½ inches in length, provided with a scale in millimetres. The glass tube is fixed to an upright piece of wood, which latter fits into a wooden base, and this when in use, can be clamped to the table for greater security. On the distal limb of the U-tube there is a bulb preventing



overflow of mercury as the instrument is pumped. An important point is the situation of the upper clamp on the proximal limb, as I find that if it is placed anywhere else one is always breaking the U-tube in putting on the necessarily thick connecting tubing. The manometer can be carried in any position provided the ends be secured with indiarubber caps. The apparatus is fitted into a conveniently sized box. It was made for me by Messrs. Down Brothers, 21, St. Thomas'-street, London, S.E.

R. NEVILLE HART.

King's College Hospital, W.C.

Looking Back.

FROM

THE LANCET, *SATURDAY*, May 31st, 1828.

As science grows older, she becomes like the miser, more tenacious of her treasures; and each succeeding discovery is disbursed to her votaries, with a more penurious hand. The difficulty of invention seems to grow with the advanced date of the exertion, and the necessary increase of its intrinsic value; first, from the more general pre-occupation of the field; and, secondly, from the higher degree of excellence demanded in the product of labour. As man, in the audacity of his enterprise, raises each year a portion of the veil of Nature, she appears to become more jealous of her charms—to shrink into her mystic sanctuary from his intrusive curiosity—and to permit every subsequent glance to be obtained only by greater vigilance and perseverance on the part of her lovers. Her first admirers had, in this respect, a manifest advantage over their successors; they gained with comparative facility a knowledge of her more palpable and general qualities, and secured a reputation extensive and permanent in proportion to the magnifying ignorance of the times in which they lived. They stood in the same relation to her modern suitors, as the first settlers in a country to future colonists. To the former, the face of nature was open. The hill, the mountain, the plain, the valley, the river, and the ocean, were all subject to their selection; they might take the most fertile provinces, without the interruption of competitors, or their right of appropriation being contested. To the latter, antecedent possession has limited the sphere of choice, and renders the exercise of industry difficult, where every acre maintains its man. Whether these disadvantages will be overcome by Dr. Alison, his friends have yet to learn; whose character I cannot conclude better than in the words of Pope:

"Of manners gentle, of affections mild,
In wit a man—simplicity, a child."

Edinburgh, May, 1828. SCOTUS.[1]

[1] Excerpt from "Sketches of the Medical Schools of Scotland. No. IX. Dr. Alison," by Scotus.

THE LANCET.

LONDON: SATURDAY, JUNE 2, 1906.

The Crusade against Tuberculosis.

IT is gratifying to note the general interest which is being awakened in the struggle against tuberculosis and in the measures directed towards the treatment of those suffering from that disease. There can be no doubt that the most hopeful and promising field of work, especially in regard to pulmonary tuberculosis, is in the effective carrying out of preventive measures, since it may be regarded as certain that if sufficiently active precautions were generally adopted the disease would become so rare as practically to be stamped out. This aspect of the tuberculosis problem—viz., the protection of the community against infection—is one the importance of which was strongly emphasised at the International Congress on Tuberculosis held at Paris in October, 1905. The fact that 60,000 deaths occur annually from pulmonary and other forms of tuberculosis in England and Wales serves to show the importance of this problem in this country. And when it is remembered that a large proportion of these deaths occur in the active and working years of life, the economic importance of this appalling wastage of human life and productive energy becomes only too apparent. Much has already been accomplished through the insistence of medical practitioners on the importance of disinfection of sputum and by the rigid precautions adopted at the special hospitals and sanatoriums which serve an important educational purpose in these respects. Individual effort can effect a great deal but much remains to be done which can only be carried out by the concerted action of the various authorities concerned with the safeguarding of the public health, from the Local Government Board downwards.

The National Association for the Prevention of Consumption and other Forms of Tuberculosis has been actively engaged during the past eight years in the popularisation of information in regard to the spread and prevention of tuberculous infections and has insisted on the importance of the duties of local authorities in regard to these matters. Recently this association has addressed a circular or memorial to every authority directly or indirectly responsible for the public health urging upon its notice the duty of exercising all the powers vested in it for the attainment of this end and suggesting various proposals for this purpose, such as those of voluntary notification, of domestic and institutional isolation of advanced cases, and certain hygienic and other preventive measures. This action of the association has met with a very gratifying reception at the hands of many of the authorities who have in a large number of cases requested further copies of the memorial, so that 10,000 of these have been sent out. In some cases the authorities have proceeded to put the recommendations into operation. The public health committee of the Rotherham district council having referred the matter to its medical officer of health, Dr. ALFRED ROBINSON, adopted all the suggestions put forward by him. Among these were the inspection of meat and the destruction of that from diseased animals, together with the abolition of private slaughter-houses in order to render inspection more efficient. In reference to the milk-supply, Dr. ROBINSON suggested municipal control rather than municipal supply and pointed out that the Rotherham Corporation Act (1904) gave the council wide powers in this direction, including the right to inspect cows and to inflict penalties on persons knowingly selling tuberculous milk or keeping tuberculous cows. Other measures adopted by the committee were the enforcement of by-laws against spitting in the streets and public places and vehicles, the proper ventilation of workshops and factories, and the voluntary notification of pulmonary tuberculosis. This last Dr. ROBINSON regards as of great importance since it is the basis of all measures in regard to individual cases, including the education of the patient, the supply of sputum bottles and disinfectants, the disinfection of infected houses, and, where desirable or necessary, the isolation of certain cases. The places suggested in Rotherham for such isolation were a special ward in the workhouse already employed for that purpose, vacant wards in the new isolation hospital when available, the site being a good one and all the means of treatment to hand, and lastly the new small-pox hospital was to be built to accommodate tuberculous patients when there was no small-pox in the district. That the Rotherham health committee adopted all these drastic proposals proves that it was convinced of their utility and urgency and it is to be congratulated upon its endeavours to deal with this important matter. The enforcement of by-laws against spitting and the question of voluntary notification of tuberculosis are matters of the utmost importance. It cannot be too frequently insisted on that the disgusting habit of spitting is largely responsible for the spread of the disease and that no measures are too strong which tend to stop it. The system of voluntary notification has already been extensively adopted, notably in Manchester, Liverpool, Brighton, and in 18 out of the 29 London boroughs, while notification is compulsory in Sheffield. The results of this measure will be watched with interest. Its usefulness would doubtless be increased if some effective co-ordination could be brought about between the health authorities and charitable organisations, especially in reference to the education of the patients and the supply of disinfectants and of nourishment. The memorial of the National Association, to which reference has already been made, suggests that notification should always be associated with an offer of aid in combating the disease, including if practicable, treatment in hospitals, homes, or sanatoriums. It is especially in reference to advanced cases among the poor that preventive measures are so essential and for which isolation accommodation is of such value, not only in affording greater comfort to the sufferer himself but in protecting the community; indeed, Dr. ARTHUR NEWSHOLME insists that the greater diminution in the death-rate from pulmonary tuberculosis in this country compared with France and Ireland is to be attributed

to the segregation of so many advanced cases in workhouse infirmaries.

In this connexion it is interesting to refer to the Nobel lecture delivered by Professor R. KOCH at Stockholm on Dec. 12th, 1905, on How the Fight against Tuberculosis now Stands, which was published in full in THE LANCET of May 26th, p. 1449. Professor KOCH points out that different countries have in the past endeavoured to deal with the problem in different ways but that lately there has been a tendency for greater uniformity in the methods recommended. He refers to notification, hospitals for the segregation of advanced cases, sanatoriums, and "care stations" as the heavy artillery in the battle against tuberculosis. Of the importance of notification, and even of compulsory notification, he speaks in the strongest terms, insisting that it should be introduced everywhere. The "care stations" are dispensaries after the manner suggested by Professor CALMETTE for the special purpose of assisting those cases which are too advanced for sanatorium treatment and not necessarily severe enough for segregation. The assistance given does not comprise medical treatment, which is obtainable elsewhere, but the patient is visited at his own home, instruction and advice are given as to cleanliness and disinfection of the sputum, while some supervision of the family is undertaken even in the matter of the supply of suitable provisions, fuel, or other necessaries in the case of the very poor. There are now more than 50 of these institutions in Germany and Professor KOCH regards them as one of the most powerful means of combating the disease. It will be seen, therefore, that the methods in use in Germany are in principle very similar to those recommended in this country.

While it is admitted on all hands that these general measures are of great and vital importance it should not be lost sight of that there is still room for improvement in regard to domestic and personal hygiene in ordinary homes, notably in respect of ventilation. A movement has just been started called the "Open Air League," which has for its objects to educate the public as to the advantages of the open window, to promote the establishment of sanatoriums for the poor, to assist in the care and employment of patients after treatment, and to advocate open-air methods for schools and public buildings. These are all worthy objects and deserve the assistance and support of those who are interested in the public weal. That the introduction of sanatorium methods has done much to popularise the open window is certain but there is still much to be done in this respect and the Open Air League proposes to employ lectures, pamphlets, and skilled house-to-house visitation for this purpose.

The Goulstonian Lectures.

IN 1632 Dr. THEODORE GOULSTON, a Fellow of the Royal College of Physicians of London, left a certain sum of money to the College for the maintenance of a lecture to be delivered annually by one of the "four youngest doctors." The terms of the trust were subsequently modified in that the doctor appointed should "read this lecture between Michaelmas and Easter, on three days together, both forenoon and afternoon, on some dead body if possibly it can be procured, which shall then and there be dissected for the purposes treated of and shall afterwards be buried." With the lapse of time the manner of carrying out these directions has naturally been modified but the spirit which prompted the study of pathological problems is still manifested in the nature of the lectures which are delivered each year. Dr. H. BATTY SHAW, the Goulstonian lecturer for 1906, in his opening remarks referred to the original intention of the founder of the lectures and pointed out that Dr. GOULSTON, being impressed with the importance of pathological study, contributed his support to the wholesome belief that theoretical considerations should not be tolerated except when corroborated by direct observation. Dr. BATTY SHAW selected as his subject "Auto-Intoxication: its Relation to Certain Disturbances of Blood Pressure."[1] During recent years the lines of pathological research have lain in the attempt to elucidate certain chemical problems connected with disease. These inquiries have been largely concerned with the products evolved by bacterial invasion. The number of diseases proved to be caused by the action of pathogenic micro-organisms is constantly increasing and the toxins produced are being minutely investigated. On the other hand, however, toxins of cellular origin have been found to exist and brilliant discoveries have been made in the domain of cytotoxins and of the interaction of organs derived from different animals upon one another. As Dr. BATTY SHAW remarked, however, such reactions could not be considered in a course of lectures on auto-intoxication and he had devoted his energies to the study of the effects of the dissolution of cells of various organs and tissues by agencies other than external ones as demonstrated by the toxic effects of their autolytic products, restricting himself in the main to the consideration of proteid and nucleo-proteid degradation.

A considerable portion of the lectures was concerned with the subject of blood pressure in disease, which has recently attracted much attention, a large number of facts having been elicited by the use of the sphygmomanometer, and any elucidation as regards the significance and causes of the phenomena noted will naturally be welcomed by practitioners. Dr. BATTY SHAW proceeded to give the results of his own experience as regards blood pressure in health and disease. He stated that hypertension was observed in 12 out of 68 clinical cases which he had examined and that in 11 out of these 12 cases there was proof that the kidneys were affected. He then remarked that the explanations of hypertension in renal cases which had hitherto been advanced were unsatisfactory and consequently the idea had arisen that some toxic cause was at work which had not yet been demonstrated. The lecturer detailed the results of experiments which he himself had made on the effects on the blood pressure of the intravenous injections of extracts of fresh organs. He showed that a rise of blood pressure occurred 18 times out of 19 in which kidney extract was used and that such frequency of a pressor effect was not noticed after the injection of extracts of other organs except the suprarenals. The important investigations of TIGERSTEDT and BERGMAN were then referred to at length. These

[1] THE LANCET, May 12th, 19th, and 26th, 1906.

observers obtained from the kidneys of rabbits an extract to which they gave the name of "renin." This substance when injected into other animals exerted a pressor effect. They found that renin was not dialysable and concluded that it was a substance *sui generis* and that the effects produced on the blood pressure were not due to any of the crystallisable substances which are excreted in the urine. A further interesting observation was made by these workers that renin was present only in extracts made from the cortex of the kidneys and not at all, or only to a slight extent, in extracts of the medulla. From further investigations TIGERSTEDT and BERGMAN suggested that in the kidneys a substance is present which under normal conditions may pass from the kidney into the blood by a process of internal secretion and may exert a pressor effect. Important as such an idea may be to the physiologist still more so is it to the pathologist; it is this latter aspect of the question that Dr. BATTY SHAW has studied and he concludes that when the kidney cortex atrophies, as in cases of granular kidney, the pressor substance resident in the cortex enters the circulation and is responsible for the rise of blood pressure met with in this condition.

Turning from the subject of hypertension to that of hypotension, Dr. BATTY SHAW proceeded to draw attention to other propositions which are likely greatly to influence pathological theories of the future. The question he asked was: "Is it at all likely that different effects are produced upon the arterial tension according to the degree of altered nutrition which exists in various organs in different diseases or in different stages of disease?" In order to answer this problem he entered upon an admirable account of the investigations that have been made as to the result of the process of autolysis. His arguments are too elaborate for us to follow here; suffice it to say that the whole subject is of great clinical as well as of pathological interest. Autolysis is a process allied to digestion and is due to the existence of intracellular proteolytic enzymes. If the blood-supply to various organs is cut off by arterial disease there is reason to believe that after a certain period of time the organs undergo atrophy by a process of autolysis. All organs which have undergone the initial process of autolysis may yield such substances as proteoses, histones, nucleinic acid, and choline. We venture to suggest, however, that autolysis of cells, though following the lines of digestive proteolysis, has not yet been shown to be followed by the development of proteoses. On the contrary, under the action of intracellular ferments, it appears that the various amino-acids and other degradation products are formed directly and without the occurrence of proteose formation. In this stage of disease these substances act on the circulation, causing a fall in the blood pressure. This fall, which is a feature of some cases of renal disease, for instance, or which may supervene after a period of high blood pressure, may be adequately explained by the entrance into the system of derivatives of kidney tissue which has undergone the early stages of autolysis. Dr. BATTY SHAW pointed out that the observation that kidney substance can produce different effects according as to whether it has or has not undergone autolysis is not only of interest in the consideration of various clinical problems connected with the elevation or depression of blood pressure but has other important bearings. It has been shown, for instance, that the extracts made from fresh, highly cellular organs when injected into the circulation experimentally are capable of producing widespread coagulation. This result lends reason for adopting WOOLDRIDGE'S explanation of certain cases of antemortem thrombosis and for accepting the view that such a condition is due to the entrance into the circulation of nucleo-proteids derived from various organs.

The Goulstonian lectures of this year may certainly be said to contain a large amount of instructive information, valuable not only on account of recorded facts but also for the highly suggestive character of the problems therein alluded to. The subject of auto-intoxication promises to be a vast one. Dr. BATTY SHAW has not only provided a very able summary of the principal work hitherto carried out but has also added some valuable original experimental observations. Much remains, however, to be accomplished; the effect of autolysis on internal secretion offers a large field for research and investigation on the lines of chemical physiology and chemical pathology may lead to a practical revolution in the ideas now held as to the working of the human organism both in health and in disease.

The Chemistry of Proteid.

IT is sometimes asserted that when the chemistry of proteid has been completely elucidated the key to the nature of the great processes of life and nutrition will be in our possession. If that be so, it is difficult to set a real value on the labours of those histologists, physiologists, and chemists who day by day are adding to our sum-total of knowledge on the behaviour, composition, and constitution of the proteids. Few problems in bio-chemical science have presented greater difficulties than that which relates to the changes which take place in the complicated albumin molecule within the field of the cellular activities of the body. Proteid has certainly so far defied all attempts to complete its construction by artificial synthetical methods and even analysis has failed to throw that complete light on its composition, not to say constitution, which in the interests of medical science is so much needed. Our knowledge of the constructive process so quietly and apparently easily performed in the plant, by which complex molecules are built up from elementary materials, is just as fragmentary as is that of both the destructive and the constructive action which takes place in the metabolism of the human body, comprising a series of interchanges, a cycle of events which is, after all, what we call life. Analysis has shown approximately what is the percentage composition of proteid and, of course, an empirical formula for it has been deduced from the results, although it is found that the elementary composition of various proteids exhibits some differences. A limited but still some measure of success has attended the attempts to determine the constitution of proteid by analysis, for the molecule under certain treatment has been broken down into degradation products identical with those found in the waste products of the human organism. Urea, for example, has

been obtained *in vitro* by acting on proteid with certain chemical agents. Again, some light has been thrown on the nature of the intermediary products of degradation of albumin by synthetical methods. Thus bodies of relatively simple structure have been made to unite, producing more complex bodies the composition of which would seem to justify the belief that not only have certain foundations been laid but also that a considerable amount of superstructure has been erected which when completed will form the entire proteid molecule. The problem is not simplified by the fact that living proteid differs in its constitution from non-living proteid and hence laboratory experiments can only be regarded as indicating partially the nature of the changes going on in the metabolic processes. Observations on the chemical behaviour of the proteid molecule in laboratory experiments cannot fail, however, to advance our views. Steadily we are acquiring fresh facts of the most valuable kind and during recent years our knowledge may be said to have advanced by leaps and bounds. This has been due to the rapid elaboration of the practical methods of attacking the problem and without doubt chemistry as a handmaid in biological research is playing year by year a more prominent and fruitful part. The ultimate object of the study has, at any rate, been brought distinctly nearer by an intelligent application of chemical principles, although probably years of patient work must yet be done before anything like finality is reached.

The present position of research with regard to the constitution of the albumin molecule is very clearly outlined in two recent publications. In his admirable lectures delivered in the Physiological Department of University College, London, now published in book form,[1] Dr. S. B. SCHRYVER points out that although the greater number of the ultimate degradation products have been isolated we know, so far, very little about the way in which they are coupled together in the albumin molecule. Of these products about 70 per cent. have been isolated in the case of most of the albumins which have been investigated. This proportion includes only nitrogenous products of the amino-acid types. In addition to these carbohydrate groups have been obtained from several albumins. Possibly such carbohydrate groups constitute a large part of the remaining 30 per cent. of the degradation products. Another degradation product is always, of course, ammonia but the biological and chemical significance of amide nitrogen is still unknown. As to the synthetic methods, valuable results have already been obtained by E. FISCHER, who has constructed the bodies known as peptides and polypeptides which represent intermediary products of albumin degradation. The simplest method by which this has been effected has been by acting on amino-acids with a mixture of acetyl chloride and phosphorus pentachloride. Leucyl chloride may thus be produced which can be directly condensed with another amino-acid to form polypeptides. The synthesis of the polypeptides therefore may be regarded as the first stage in the artificial construction of an albumin molecule and thus a very interesting light may be forthcoming as to its behaviour in the metabolic processes. On the other hand, Dr. GUSTAV MANN in his excellent and exhaustive account of the subject,[2] which includes many of his own valuable contributions, remarks that to be able to make marsh gas, alcohols, aldehydes, amino-acids, peptides, peptones, and albumin, however great an achievement in itself, is not the same as making life. That is a truism, however, which should not discourage research which is calculated materially to help us to understand the sequence of events concerned in the transformations of the albumin molecule and to explain its fundamental purposes in the human cell. Such knowledge indeed must tend to make clearer than before the etiology of those diseases which is at present obscure and to lead ultimately to a means, if need be, of controlling cellular activity either by increasing or diminishing it. In that event medical science will not be slow to recognise the importance of pursuing the study of the composition and the constitution of the proteids.

[1] Chemistry of the Albumins, by S. B. Schryver, D.Sc. Lond., Ph.D. Leipsic. London: John Murray. 1906.

[2] Chemistry of the Proteids, by Gustav Mann, M.D. Edin., B.Sc. Oxon. London: Macmillan and Co., Limited. 1906.

Annotations.

"Ne quid nimis."

THE MIDWIVES ACT (1902) IN MANCHESTER.

A MOST interesting report on the working of the Midwives Act, 1902, in Manchester has been made to the council of that city by Dr. J. Niven, the medical officer of health. The importance of the Act in Manchester is very great, as no less than between 10,000 and 11,000 births took place under the care of midwives in this city in the year 1905. In his report Dr. Niven puts forward several valuable suggestions as to how the Central Midwives Board might help the local supervising authorities in carrying out the Act. He suggests that the Board should publish a list of institutions and officers authorised to give instruction to midwives and that the local authority should report from time to time on the work of any teaching institutions in its district. Another point worthy of consideration, he thinks, is the matter of the judicial position of the Board. When a local supervising authority finds a *primâ-facie* case of malpractice, negligence, or misconduct against a midwife it must report it to the Central Midwives Board. Not infrequently it happens that the local authority has some difficulty in determining what cases come under these respective headings and Dr. Niven suggests that the Central Midwives Board should publish an account of typical cases and a brief statement of the grounds on which its decisions are founded. In Manchester the midwives supervising committee has appointed a medical executive officer to work under the medical officer of health and to help in carrying out the duties arising in connexion with the Act, and in January, 1905, Dr. Margaret M. Smith was appointed to this position, and a report by her is appended to Dr. Niven's statement. Considerable difficulty has been met with in Manchester, as, indeed, has been the case elsewhere, in obtaining early notification of cases of puerperal fever by medical practitioners. In order to remove any ambiguity and to remedy this a letter was addressed to all the practitioners in Manchester suggesting that any case should be notified as puerperal fever in which at any time during the first 14 days after confinement the temperature rose and remained for 24 hours above 100 4° F., the pulse being at the same time accelerated, unless the fever could be accounted for otherwise than as resulting from some affection of the pelvic organs.

It not uncommonly happens that severe cases of septic infection owe their origin to mild cases and the failure to notify such mild cases may result in the spread of the disease. Any case of death of a woman recently confined is at once investigated by Dr. Smith or Dr. Niven and in this way no doubt much good will be effected in preventing the spread of puerperal fever. The important question of the payment of fees to medical men called in under the Act by midwives has been considered by the midwives supervising committee and after a number of meetings had been held the following resolution was drafted and approved, viz.:—

That an amendment of the Midwives Act, 1902, with a view to settle the question of payment of fees to medical practitioners under the rules of the Central Midwives Board called in on the advice of midwives is one of urgency, and that a speedy amendment of the Midwives Act is called for dealing with the matter.

A further motion was carried that for the present medical practitioners in default of payment by the patient should apply to the corporation under the Public Health Act, 1875, and any other powers which the corporation may possess. The corporation should then inquire into the circumstances of the family and defray the fee in all cases in which the income of the family does not exceed a certain standard rate depending on its numbers. At the instance of the supervising committee the city council of Manchester applied to the Local Government Board to allow it to pay medical fees under the Public Health Act, 1875, and this was granted on April 5th, 1905. The city council therefore resolved that such fees should be paid, the maximum fee not to exceed one guinea. This arrangement is to be regarded as purely temporary until the subject of medical fees has been dealt with by general legislation and the corporation, while deeming it expedient to pay such fees in the interest of poorer persons and for the prevention of disease, will not admit that any claim exists against it. Dr. Niven's statement that much useful work has been done in Manchester under the Midwives Act is one that is more than justified judging from this very interesting and valuable report which contains many suggestions of considerable importance. We hope to refer to the report presented by the executive medical officer, Dr. Margaret Smith, on another occasion.

"CHRISTIAN SCIENCE."

QUACKERY of every kind flourishes as is well known absolutely unrestricted in this land of freedom; moreover, London, as is the way of large cities, supports a perfect horde of those who by the exercise of their wits coax money from the pockets of their dupes. Just as the ancient world had its Alexander, of whom such a scathing account was given by Lucian, or its fortune tellers or philtermongers as exposed by Juvenal, so London possesses its beauty quacks, its fashionable lecturers, and its professors of "Christian Science." Parliament seems to be too busy to take note of the evil but we see with satisfaction that the London Diocesan Conference at its recent sitting held a most interesting discussion upon the system of conscious or unconscious fraud known as "Christian Science." A resolution was unanimously passed which ran as follows:—

That this conference, while emphasising the power of faith in healing, view the main outlines of the teaching and attitude of Christain Scientists as antagonistic both to Christianity and science.

The Bishop of London, who wound up the discussion, laid great stress upon two points—one being the influence of mind over matter and the other that the clergy should work together with the medical men, for he is reported as saying, "He had seen instances which convinced him that if we work with the doctors, using every physical means, the prayer of faith does help on the sick person." He further stated that the question of unction had been considered at a meeting of the bishops. On the whole the feeling of the conference appears to have been that modern Christianity had not laid sufficient stress upon the importance and practice of faith, especially in illness, and that the Scriptural rite of unction should be restored. Moreover, it was allowed that "Christian Science" had laid hold of a truth in its insistence upon faith. There is no medical man who will deny that if a sick person has hopes of recovery or some definite stimulus to desire recovery he is much more likely to get well than if he had no such belief. A man, for instance, who says, "I must get better, for if I do not my wife and children will be very badly off," is more likely to recover than one who says, "It does not matter whether I live or die." Faith of this kind is of the utmost assistance to the medical man in whose hands lies the conduct of the case. In view of a case which is at present *sub judice* we cannot enter more fully into the question of "Christian Science" but we may hope that before long Parliament will consider this question among other forms of evil which affect modern life.

OPERATIVE TREATMENT OF UNUNITED FRACTURES OF THE NECK OF THE FEMUR.

THE rarity of bony union in unimpacted intracapsular fractures of the femur is well known. Few cases of treatment by operation have been recorded. In the *Boston Medical and Surgical Journal* of May 10th Dr. Farrar Cobb has reported the following case. A lad, aged 18 years, was admitted into hospital with a diagnosis of dislocation of the hip. Nine weeks previously he fell and injured his right hip. Total disability and much pain followed. The right leg had been shorter than the left as a result evidently of infantile paralysis but he could run and play as well as other boys, though with a limp. On admission the right leg showed more atrophy than could be accounted for by the comparatively recent injury and was three inches shorter than the left. There were some flattening of the right buttock and tilting of the pelvis. The top of the trochanter was three inches above Nélaton's line. A skiagraph showed an intracapsular fracture of the neck of the femur with a little callus formation. Following the method suggested by Trendelenburg an incision was made down the thigh from the anterior superior spine of the ilium. After blunt dissection between the tensor vaginæ femoris, sartorius, and rectus muscles the capsule of the hip was exposed by means of strong retractors. The capsule was opened by an incision parallel to the Y ligament. With a chisel and curette the surfaces of the fragments were scraped and a little loose callus and fibrous tissue were removed. By extension the trochanter was brought down so that the neck came into proper relation with the head of the bone. An incision was then made over the external surface of the trochanter and a long steel wire nail freshly polished was driven through the trochanter and neck of the bone into the head. The anterior wound gave full opportunity to guide the nail with the finger so that proper fixation of the head of the bone could be secured. The capsule was closed with two catgut sutures and the muscles and fascia were carefully approximated. Both wounds were sutured and the limb, while carefully held in position, was put up in a plaster-of-Paris spica bandage from the waist to the toes. On the tenth day windows were cut in the plaster and the stitches were removed from the wounds which were found to have healed. Six weeks after operation the bandage was taken off and the nail was cut down on under cocaine anæsthesia and pulled out with little difficulty. Union appeared to be firm but the spica was re-applied. Two weeks later it was finally removed. The hip-joint allowed motion—half flexion, some rotation, and slight abduction. Three days later the patient went about on crutches. Three months after operation he could walk

well. There was more shortening than before the injury and the top of the trochanter was higher than it was supposed to be when the nail was driven. The first operation of this kind was done so long ago as 1858 by von Langenbeck with fatal result. The method of the early operations was defective; a small incision was made down to the trochanter and a nail or screw was driven without guidance of the finger or eye through the neck of the femur. Nicolaysen of Christiania has had considerable experience and remarkable success with the operative treatment of fracture of the neck of the femur. Up to 1900 he reported 21 cases, the ages of the patients varying from 39 to 78 years. The results in all cases were satisfactory; firm union and a useful joint were obtained. When the trochanter is drawn into place he hammers a steel wire nail from four and a half to five centimetres long through the neck and head of the femur. In most of his cases he used no anæsthetic. He covers the end of the nail with antiseptic gauze and applies a plaster-of-Paris spica bandage. After three or four weeks a hole is cut in the plaster and the nail is removed. After eight or ten weeks the bandage is removed but the patient is allowed up on crutches for some time previously. Dr. Cobb thinks that in intracapsular fractures of the neck of the femur the operation of nailing should be performed whenever possible. In the young and the middle-aged and when there are no contra-indications he prefers the method of open incision; in the old or debilitated, Nicolaysen's method.

THE INFLUENCE OF BENJAMIN FRANKLIN ON THE PROGRESS OF MEDICINE.

THE two-hundredth anniversary of the birth of Benjamin Franklin, which was celebrated in Philadelphia in April, has led to the publication of many interesting facts connected with the life of this versatile American. Starting life as a printer he became famous as a statesman, a diplomatist, and a philosopher, and his memory is still revered for the active part that he took throughout a long life both as a citizen and as a philanthropist. Some interesting particulars are given in the May number of the *American Journal of Pharmacy* respecting the influence which he exerted on the progress of medicine notwithstanding the fact that he was a layman. He published several books on medicine and throughout a varied career he appears to have had a predilection for the friendship of medical men. He published for some years the *Pennsylvania Gazette* in which he frequently advocated the then newly-introduced practice of inoculating for small-pox. The American colonies were at that time peculiarly susceptible to periodic visitations of malignant small-pox, which spread with alarming rapidity, and Franklin after persistent efforts was enabled ultimately to overcome the opposition of all classes of the community to the practice of inoculation. Franklin was also a dealer in drugs, which he advertised in the *Pennsylvania Gazette* in a manner that could hardly have been appreciated by his medical friends. In one advertisement he offered for sale—"Senaka rattle snake root, with directions how to use it in the pleurisy." He was probably the originator of the modern type of department store, his commodities varying from needles and pins to horses and slaves. He was a staunch and an ardent advocate of hygienic measures of all kinds and in this respect he was far in advance of his time. He constantly recommended cleanliness and sobriety and in advising the practice of sleeping with an open window he gave the assurance that "no outward air that can come in to you is so unwholesome as the unchanged air, so often breathed, of a close chamber." There is no doubt that Franklin's wide reputation for common sense and deep learning gained for him the ear of the public even in matters with which by training he was not qualified to deal. Perhaps the most important contribution of Franklin to medicine was connected with the part that he took as a member of the Royal Commission appointed by the King of France in 1784 to inquire into, and to report on, the claims of Mesmer and his practice of animal magnetism. The Commission consisted of four of the leading physicians of the Faculty of Paris and five members of the Royal Academy, of whom Franklin was the first to be appointed. Mesmer had gone to Paris from Vienna in 1778 and soon acquired considerable popularity. The resulting abuses became so serious that the Government was virtually compelled to interfere. The report of the Commission served to give such a destructive blow to this peculiar conglomeration of fraud and folly that during the lifetime of Mesmer it was not again heard of to any material extent. It may be said that in matters medical, as in matters scientific and political, Franklin was far ahead of his contemporaries in originating ideas and innovations, in disseminating useful knowledge, and in acting as the champion of practices and teachings which commended themselves to his foresight or to his experience.

CHAILLETIA TOXICARIA: A WEST AFRICAN POISON.

IN the *Journal of the African Society*, 1904, Dr. Renner drew attention to the common use of the powdered fruit of *Chailletia toxicaria* (Don) as a poison in the colony of Sierra Leone. The plant is known as "ratsbane" or "broken back" and grows plentifully in West Africa and in South America where it has been largely used for the destruction of rats and other animals. But in Sierra Leone and the Hinterland it has been extensively used by the natives to poison one another, a favourite method among the Timnes and Mendis being to poison with the drug the wells and streams which supply hostile villages with water. Domestic animals poisoned by it rush about as if in severe pain; they vomit and drag their hind limbs which become paralysed. The muscles of the forearm and chest also become paralysed and the animals die from paralysis of the respiratory centre. In the case of the natives the lower limbs are paralysed and the recovery of a patient depends on the amount of poison that has been administered. Dr. F. B. Power, Mr. F. Tutin, and Mr. H. H. Dale have investigated the chemical and physiological properties of the plant and have communicated their results to the International Congress of Applied Chemistry at Rome.[1] Tests for an alkaloid, a cyanogenetic glucoside, and a poisonous proteid were made, but they all gave negative results. A resinous substance, obtained by precipitation from an alcoholic extract of the fruit by the addition of water, was successively extracted with chloroform, ethyl acetate, and alcohol. The products differed essentially in physiological action—when administered to a dog in 0·5 gramme doses the chloroform extract producing a narcotic or paralytic effect, the ethyl acetate extract resulting in delirium and convulsions, while the alcoholic extract, although causing nausea, was not distinctly toxic. The aqueous liquid, after separation from the resinous substance, when administered to a dog in relatively small doses produced the characteristic action of the fruit—viz., delirium and epileptiform convulsions soon followed by death. The investigation has proved that the effects of the poison contained in chailletia fruit are not manifested until some time after its ingestion. A period of several hours may elapse, varying with the quantity of poison administered, before convulsions occur but after the onset of the symptoms death usually follows in

[1] Chemist and Druggist, May 12th, 1906, p. 737.

from 15 to 30 minutes. A post-mortem examination of a dog showed a condition of cerebral congestion and thrombosis of the superior longitudinal sinus. The conclusion is drawn from these experiments that the fruit of *Chailletia toxicaria* contains at least two active principles, one of which causes cerebral depression or narcosis and the other cerebral excitation leading to epileptiform convulsions. The latter poison is very slowly excreted, so that a cumulative effect is produced by the administration of a series of individually innocuous doses.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ON Thursday, July 5th, the Fellows of the College will proceed to the election of three members of Council. The members of Council who retire by rotation are Mr. John Langton, Mr. Henry Morris, and Mr. F. Richardson Cross. Mr. Langton was first elected in 1890 and has served for two terms of eight years. Mr. Henry Morris was first elected in 1893. Mr. John Tweedy's term of office would also have come to an end at the same time as the others, but as he was re-elected President last July he will therefore be President at the time of election; he will remain a member of the Council for another year. All nominations of candidates for the vacancies on the Council must be made on forms to be obtained from the secretary and the forms, when duly filled up, must reach the College by Monday, June 11th.

PERFORATION OF THE MEMBRANA TYMPANI DUE TO LIGHTNING.

IN the *Brooklyn Medical Journal* for April Dr. W. C. Braislin has reported two cases of a very rare injury due to lightning—perforation of the membrana tympani. On July 30th, 1905, during a thunderstorm a large bathing pavilion at Coney Island, which was crowded with bathers seeking shelter, was struck by lightning. Five persons were killed. One of these was a young man who was entering the pavilion between the subjects of the cases to be related. All the persons killed and most of those injured were near the base of a flagstaff which projected above the roof. All had just left the salt water and were still in wet garments. In the first case the patient was a man, aged 27 years. He was burned and rendered unconscious for three hours. On recovering consciousness he noticed fulness, tinnitus, and impairment of hearing in both ears. On August 1st he came to hospital with his hair burned on the left side of the occiput and a burn on the back of the neck which extended across the left scapula and down the arm to the elbow. The burn on the shoulder was irregular, of the size of the hand, and purplish red. There was a blood-stained discharge from the left ear, which began on the morning following the injury. Examination showed a round perforation of the drum one-eighth of an inch in diameter slightly in front of, and below the centre of, the membrane. The edges of the perforation were reddened and raw. The remainder of the membrane was pale. On the following day the membrane was uniformly red except at the margin of the perforation where it was everted, raw, and swollen. The wife of this patient was injured at the same time but less severely. She was only momentarily unconscious and immediately noticed that her hearing was defective and that there was roaring tinnitus in both ears, which was worse in the left. Examination on August 2nd showed a small perforation sealed with a blood-red scab in the centre of the left membrane just behind the umbo. In both cases no lesion was found in the right ear. Dr. Braislin thinks that the injuries were due to the presence of water in the ears which acted as a good conductor of electricity. At the time of the accident the patients had only just left the surf. Examination with the tuning-fork disclosed no lesion of the auditory nerve. Healing rapidly took place under dry dressings, leaving only slight impairment of hearing.

WHAT IS WHISKY? THE APPEAL.

PROCEEDINGS were commenced at the Clerkenwell quarter sessions on Monday last on the occasion of the hearing of the appeal against the decision given by Mr. Fordham in the North London police court two months ago on the question as to what is Scotch and Irish whisky. Any fresh facts forthcoming will be placed before the bench at Clerkenwell, while the evidence so far taken has been furnished by witnesses who appeared in the case previously and whose statements were on all fours with those made on that occasion. The case will doubtless occupy attention for some days and the decision will have an important bearing on the future conduct of the spirit trade.

THE CHILDREN'S COUNTRY HOLIDAY FUND.

THE appeal issued by the Right Hon. Alfred Lyttelton and the Hon. W. F. D. Smith, the trustees of the Children's Country Holiday Fund, on behalf of the poor children in London elementary schools should meet with a liberal response. Nothing but good to the community can result from sending into the country for a fortnight the children of the poor who during the summer holidays fill our courts and alleys and the many mean streets which, in spite of our advanced sanitary knowledge, still exist in our midst. Healthy childhood means a healthy community. The Children's Country Holiday Fund embraces in its operations the whole of London and all children under 14 years of age are eligible without regard to sex or creed. In 1904 39,000 children were maintained for a fortnight in the country by this organisation and last year the number was only slightly smaller. This year the committee hopes that sufficient funds will be forthcoming to allow of giving not less than 40,000 children a sojourn among the green fields. Not only the wealthy and charitably inclined but those of moderate means may help this deserving object by sending to the honorary treasurer, the Earl of Arran, at 18, Buckingham-street, Strand, London, W.C., a donation whether it be of pence, shillings, or pounds.

THE STANDARDISATION OF DISINFECTANTS.

IN discussing the question of the standardisation of disinfectants in a leading article in THE LANCET of Feb. 10th, p. 385, we said in view of the results of certain experiments made by Dr. Henry R. Kenwood and Dr. R. T. Hewlett on the destructive effect of organic matters on the germicidal value of certain coal-tar disinfectants, "that it is obviously desirable that a carbolic acid coefficient should be based on the most exacting requirements of actual practice, taking into account the environment of the pathogenic organisms which, in some cases at any rate, is calculated to weaken the germicidal agent." The same point is brought out with some force by Mr. M. Wynter Blyth, B.A., B.Sc., in a paper published in the April number of the *British Sanitarian*. The Rideal-Walker test he rightly regards as a test on naked organisms in distilled water, the one condition of all others which is least likely to be met with in practical disinfection. The test, however, may be valuable used as a control over the constancy of germicidal efficiency of a given disinfectant preparation but to hold that the figure so obtained necessarily represents the efficiency of that preparation in actual practice would be illogical in view of the fact that organic matters may very likely weaken this efficiency. In other words, before the absolute efficiency of a disinfectant can be declared its incompatibility, so to speak, with the organic matters with which it is likely to

come into contact in the common practice of disinfection must be taken into account and a fairly wide margin must thus be allowed. For example, a given disinfectant may show a splendid germicidal efficiency when employed, as Mr. Wynter Blyth says, on naked organisms in distilled water but this efficiency may be reduced to *nil* by the interference of organic matters. Conversely, another disinfectant preparation may show a smaller germicidal power on organisms in a pure environment, yet may have a relatively greater germicidal effect on, say, a typhoid stool because its bactericidal power is not materially weakened by organic matters. It follows from a consideration of these facts that the germicidal incompatibility of a given disinfectant, as we may call it, must be taken into account before any comparative value of its disinfecting powers can fairly be stated in so many pounds, shillings, and pence.

THE FEEBLE-MINDED CHILDREN OF THE MIDDLE CLASS.

THE governing members of the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded have taken an important step in providing for the reception at a moderate cost in a special school of feeble-minded children of middle-class parentage. There has been set aside a suitable building, Warford Hall, for boys of this type, the society having become aware that there are numbers of feeble minded children whose parents can well afford to pay £50 or £60 per annum for their education but who cannot possibly afford to pay the larger sum generally asked for their maintenance and tuition at special educational establishments. It is the idea of the society to work under the Board of Education and to secure regular inspection. The school cannot be used for the reception of idiots or imbeciles but is intended strictly for the feeble-minded whose education is so serious a problem and whose future is so very precarious. At present the society only tries to deal in Warford Hall with boys but the future intention is to establish a similar school for girls.

POISONOUS POSTAGE STAMPS.

IT is an obvious counsel of perfection to advise the public to relinquish the very common and dirty practice of licking postage stamps and it cannot be denied that such an objectionable habit may have dangerous consequences. Hitherto, however, we had not been able to obtain direct satisfactory evidence of the presence of chemical poisons in the postage stamp or in its colouring matter, the cases of poisoning which are on record having been traced to bacterial rather than to chemical entities. This week, however, on the occasion of sending to the churches advance proofs of our Special Hospital Sunday Supplement in parcels requiring a threepenny postage stamp, we were struck with the brilliancy of the yellow colouring used in this stamp and we were somewhat startled to find on analysis that this colouring was due to a poisonous salt, chromate of lead (chrome yellow). Nor is the amount negligible, as will appear from the following figures obtained on a quantitative analysis. Each threepenny stamp weighs rather more than half a grain and the quantity of chromate of lead present was found to be 2·53 per cent. On this basis 70 stamps would contain one grain of poisonous lead salt. Cases of fatal poisoning by chromate of lead are on record which illustrate the powerful poisonous effects of this salt. As little as one-fifth of a grain proved fatal to two children who had sucked the colouring from some pastry adorned with ornaments containing chromate of lead. The ornaments were imitations of bees, or perhaps wasps, and each contained about one-sixteenth of a grain of chromate of lead. According to an analysis, therefore, of the threepenny postage stamp a fatal dose (one-fifth of a grain) of chromate of lead would be contained in 14 stamps. It may be pointed out also that the threepenny postage stamp is in considerable use owing to the fact that it represents the minimum fee for posting through the parcels post. We earnestly commend these facts to the Postmaster General. So long as people have a moist tongue they are certain to use it as a means of attaching stamps to parcels and envelopes, and although the habit is unnecessary and dirty the public should not be exposed to the risks of lead poisoning in this simple fashion. Surely if yellow colouring must be used to distinguish one postage stamp from another some innocent dye can be found amongst the numerous aniline yellows.

THE NOTIFICATION OF ERYSIPELAS.

FROM time to time there is a temporary agitation among those desirous of varying the statutory list of compulsorily notifiable infectious diseases which was drawn up 17 years ago. Local sanitary authorities always have possessed limited powers to add further diseases to the original list. Thus chicken-pox was made notifiable in London during last year under this provision; again and again measles has been suggested and now pulmonary tuberculosis has many advocates for notification. On the other hand, there are no powers at the command of local authorities by the exercise of which the original list may be abbreviated. The Stepney borough councillors, however, on the recommendation of their public health committee, have just decided that Section 55, Subsection 8 of the Public Health (London) Act, 1891, should be amended by the exclusion of erysipelas from the list of compulsorily notifiable diseases; they have also memorialised the Local Government Board and the other metropolitan borough councils to that effect. They urge that erysipelas is now known not to be infectious in the same manner and degree as the diseases associated with it in the Act, so much so that seldom are strict antiseptic precautions adopted during its treatment in the home and further, that it is infrequent for sanitary officials to carry out a serious disinfection of the apartments lately occupied by a patient so suffering. As a matter of fact, in practice the rule of Stepney itself is to disinfect the rooms but in so doing Stepney agrees only with a minority of authorities, for most consider such a drastic proceeding as an uncalled-for annoyance of the family of the patient. If no such action supervenes after the medical practitioner's notification of erysipelas, it is alleged that the municipality is put to a needless, because useless, expense. They suggest that this disease well might be relegated to the class of those infections which are notifiable or not at the option of each individual local sanitary authority.

A CASE OF HYPERPYREXIA.

WE have received from Mr. J. I. de Quadros, of Byculla, Bombay, a pamphlet containing an account of a remarkable case of hyperpyrexia, being an abstract of a paper read before the Bombay Medical and Physical Society on August 17th, 1905. The patient was an unmarried European female, 47 years of age, one of whose servants had died from plague on March 27th, 1905, and who herself on the forenoon of the following day had a distinct rigor, succeeded by severe vomiting, headache, and fever, with pains all over the body. A medical man who was called in diagnosed plague. When Mr. de Quadros saw her at 11 P.M. her temperature was 107·4° F. and she was vomiting a good deal. Nothing abnormal was found in the lungs but the heart sounds were very feeble and intermittent. The abdomen was large, full, and markedly tender. The hypogastrium and both flanks were occupied by a large fibromyoma. He considered the case to be one of peritonitis and prescribed a

sedative diaphoretic. On March 29th her temperature was normal at 7 A.M., 110° at 1 P.M., and 100° in the evening. On March 30th she vomited a good deal and was very low; the highest temperature for the day was 108·4° early in the afternoon, falling to 96° in the evening. On March 31st she was very low, with intermittent pulse and hiccoughing a good deal. Mr. de Quadros called in consultation Lieutenant-Colonel H. P. Dimmock, I.M.S., who was of opinion that the disease was not plague but endocarditis; the patient's temperature rose twice this day—namely, to 111° at 2 A.M., falling in the forenoon to 96·8° and rising again to 112·4° at 10.30 P.M. On April 1st she had a fairly good day but in the evening she complained again of pain in the cardiac region; her pulse was bad, her extremities were cold, and respiration was difficult; at 8.30 P.M. her temperature had risen to 110°. On April 2nd the temperature rose to 110° at 4.30 A.M. and again at 2 P.M.; the chart accompanying the description of the case shows that temperatures between 95° and 97° were also five times noted on that day. The chart further shows that these great fluctuations continued almost daily until April 19th. During this period a maximum of 111° was noted twice on April 3rd, twice on April 5th, and once each on April 8th, 12th, 15th, 17th, and 19th; simultaneously temperatures of 97° and under were invariably noted several times each day. On April 20th and 21st the highest temperature recorded was 103° and after this it remained normal until April 28th, when the patient had severe pain in the heart and a rigor; the temperature at the same time rose to 111°, remained high for two hours, and then dropped to normal, leaving her exhausted. After May 1st she remained well. As already mentioned, Mr. de Quadros at first believed the case to be one of peritonitis but the subsequent progress of the symptoms led him to change this view; he was unable to accept the diagnoses of plague and endocarditis and he inclined to the opinion that it was a case of "flushing" due to climacteric disturbance.

THE TRAFFIC IN OLD HORSES.

UPON many previous occasions we have protested against the cruelty which arises from the practice of shipping old, diseased, and worn-out horses to foreign ports. On May 26th three men were charged at Tower Bridge police court with cruelty to two horses which were being taken along the streets for shipment. Their names were Reynolds, a labourer, who was in charge of the horses, and two dealers named respectively Shaw and Pitcher. Pitcher confessed that he was the owner. The magistrate, Mr. Cecil Chapman, delivered himself of some remarks which were so excellent that we give them as reported:—

> Mr. Cecil Chapman said this traffic in old and infirm horses was a serious matter. A question had been asked in the House of Commons and the Home Secretary had promised an inquiry. Cruelty to a dumb animal was the meanest possible offence at any time, but when it was deliberately done for the sake of gain a fine was altogether inadequate punishment. The cases of gross cruelty to horses on their way to the wharf for shipment abroad were becoming very frequent and the difficulty was to fix the responsibility upon the right person. In this instance Pitcher declared that he was the owner and had sent the suffering animals out and he would be sentenced to six weeks' hard labour. Shaw's interference showed that he had some sort of connexion with Pitcher's business and he was guilty of aiding and abetting. He must pay a fine of £5 and £3 17s. 6d. costs, and Reynolds, who took a subordinate part, 40s. fine with the alternative of a month's imprisonment. All lovers of animals must be filled with horror that such a traffic in horses only fit to be slaughtered should continue and a public inquiry was urgently needed.

In the last case upon which we commented[1] the accused remarked about the wretched animal which he had tortured, "I knew the feet were a bit rotten; I bought it to sell for shipment abroad. They fetch a better price there." The traffic is a scandal and we cannot see why the Government should not put it down.

THE Department of Public Health of Queensland in its Plague Bulletin No. 7 states that for the week ending April 21st 2 cases of plague were notified since the issue of the previous bulletin which was dated April 12th. During the week there was 1 death from plague. At Rockhampton 4 cases were notified during the week, all of which were connected with the same warehouse from which the previous four patients had come. Of the first 4 cases 1 died and f the last 4 cases 3 died. The medical officer of health of the Cape Colony states that for the week ending May 5th there were found dead in a grain store in East London 5 rats and 18 mice which upon examination proved to be plague-infected.

THE annual dinner of the West London Hospital, where the past and present staffs and junior staffs of the hospital meet the members of the Post-Graduate College, will be held at the Trocadéro Restaurant, London, on Thursday, June 28th, at 7 P.M. Mr. Stephen Paget, surgeon to the hospital, will preside. All information with regard to tickets can be obtained from the dean of the Post-Graduate College, West London Hospital, Hammersmith.

A CIRCULAR order has been issued by the Home Office to magistrates pointing out that certificates of exemption under Section 2 of the Vaccination Act, 1898, must not be refused on the grounds of the medical, sanitary, or statistical ignorance of the applicant. The magistrate has only to be convinced of the reality of the objection to vaccination; the foundation of the applicant's objections are not to be considered.

Sir Donald Currie, G.C.M.G., through whose munificent gift of upwards of £100,000 the buildings are being erected, will lay the foundation-stone of the School of Advanced Medical Studies, Nurses' Home, and Maternity Students' House in connexion with University College Hospital, Gower-street, London, on Monday, June 11th, at 4 P.M.

THE annual meeting of the Colonial Nursing Association will be held on Wednesday, June 13th, at 3.30 P.M., in th library of the Colonial Office, Lord Ampthill presiding.

MOSSLEY WATER.—Attention has been called more than once to the long-continued prevalence of lead poisoning at Mossley. It was stated at a meeting of the town council on May 10th that several additional cases had occurred. But other revelations were forthcoming which show that lead poisoning is not the only danger threatening the Mossley people. The members of the council visited the waterworks at Swineshaw and were met by the chairman and the secretary of the Ashton and District joint waterworks committee and their reception was described as most hostile. The conditions surrounding the waterworks were said to require drastic alterations. There was an abundance of swamps in the neighbourhood of the reservoirs, into which they drain. Within a stone's throw of the water there was heavily manured land, the surface drainage from which also ran into the reservoirs. A short distance off was the rotting carcass of a dead animal and it was said "to be a common thing to find them lying dead and rotting in the morasses higher up the valley." One of the aldermen could not find words in which to condemn all in connexion with the waterworks committee. There seem to be a good deal of primitive savagery, a disregard of filth, and an absence of objection to drinking it among those who provide Mossley with its water-supply, which are unusual and unexpected. For if sometimes quaint in speech and manner a keen intelligence is generally found among the people of the Lancashire manufacturing valleys. The Local Government Board has been asked to hold an inquiry into the state of the water-supply but, it was said, "has still declined." Yet the case seems a suitable one for an inquiry and that without delay. It is not known how many deaths the Local Government Board considers should take place from lead poisoning or what proportion these deaths should bear to the population in order to justify an inquiry, but the sooner measures are taken to remedy this disgusting and dangerous state of things the better for Mossley.

[1] THE LANCET, May 27th, 1905, p. 1446.

THE HARBEN LECTURES FOR 1906.

Delivered at King's College (University of London) on May 25th, 28th, and 30th, 1906,

BY PROFESSOR ELIE METCHNIKOFF.

LECTURE I.

The Hygiene of the Tissues.

PROFESSOR METCHNIKOFF (who delivered his lecture in French), after some remarks on the methods of modern medicine proceeded to observe that in the course of typhoid fever there was formed in the serum at the same time as agglutinin a property called "sensibilisatrice"—i.e., a substance which modified the typhoid bacilli in such a way as to render them more liable to be destroyed in the body. The idea that these properties of the body liquids played a primary rôle in immunity had become so deeply rooted that it had even been suggested to measure the degree of immunity by the agglutinating or the sensibilising power of the blood serum. Later, however, it became necessary to give up that method. On the one hand, persons might be refractory to typhoid fever without possessing any specific properties in their body liquids, yet, on the other hand, the presence of such properties in no way guaranteed immunity. Thus they might frequently observe a large quantity of these agglutinating and sensibilising substances in the serum of patients at the time when a relapse of the disease was developing. He described experiments which proved that the essential phenomenon in acquired immunity consisted in certain modifications which living parts of the body underwent. The phagocytic organs were the nuclei of production of the antityphoid sensibilising substance. On the strength of researches they might conclude that the phagocytes, those cells which fought against the microbes and which devoured and digested them, were able to elaborate and even to excrete into the blood substances which fixed themselves on to the microbes and rendered them more amenable to their destruction by the body.

Recent observers on the origin of the antityphoid sensibilising substance insisted on the local production of these substances and concluded that every living cell could produce sensibilising substances, but the peritoneal and pleural liquids, far from harbouring all sorts of cellular elements, contained a number of different phagocytes, and therefore further support was given to the thesis that the phagocytes were the true producers of sensibilising substances. Acquired immunity should therefore be regarded as a superactivity of the phagocytes which manifested itself by the over-production of sensibilising substances, by their power of reacting strongly to the introduction of microbes and their products, and, lastly, by their capacity of enveloping pathogenic microbes and of destroying them intracellularly. Extensive series of experiments carried out in the last few years had proved that the essence of immunity lay in the living elements of the body and that it was the phagocytes which gave protection. The humoral theories of immunity, which sought to explain this phenomenon by certain pre-existing properties of the body liquids, had proved to be incapable of being maintained. But latterly the attempt to detract from the importance of phagocytic action by subordinating it to a humoral influence had been renewed. It was chiefly Wright who was the champion of that new theory.

Though fully recognising that the destruction of microbes in the organism was mainly effected by the phagocytes, Wright asserted that these cells could only act on such microbes as had already been impregnated with opsonin—i.e., a soluble substance circulating in the blood and met with in the other body liquids. As proof of that theory Wright cited numerous experiments made by himself and Douglas in which he allowed the phagocytes to act on microbes outside the human body *in vitro*. If the mixture of those living elements was bathed in normal serum of man or animals phagocytosis began almost immediately, whereas it did not commence until much later and was but imperfectly accomplished when phagocytes and microbes were brought in contact with serum that had been heated to 60° C. If the microbes alone were emulsified in unheated normal serum the opsonin of the serum fixed itself on to them and made them amenable to speedy envelopment by the phagocytes. Wright supposed that the phagocytes played only a passive rôle which depended on the preliminary action of the opsonin. Neufeld and Rimpau in the sera of animals immunised against various microbes found a substance which had no direct action on the phagocytes but which could fix itself on to the corresponding microbes and thus modify them in such manner that they were more easily devoured by the phagocytes. Neufeld and Rimpau called that substance a "bacterio-tropic substance" and considered it to be distinct from opsonin. Wright had himself in his later publications acknowledged the occurrence of spontaneous phagocytosis—i.e., phagocytosis which became apparent without any addition of opsonins. One might suppose that in these cases of spontaneous phagocytosis the opsonin, should it really be indispensable, might be secreted by the leucocytes. Thus these cells, having been transferred into normal saline solution and finding no opsonin in the surrounding liquid, might themselves give off enough of it to allow them to envelop the microbes. This supposition had not yet been experimentally verified, but should it be confirmed it would prove that the phagocytes were capable of producing substances preparatory to phagocytosis. If the opsonins were identical with the sensibilising substances the problem might be considered as already solved, for the phagocytes were without a doubt one of the sources of these latter substances. Even if one were forced to the conclusion that the preparatory action of the opsonins was absolutely necessary, and that those substances could only arise from the serum, their function would still appear to be a far less important one than that of the phagocytes. For the opsonins could only prepare the microbes for their destruction by fixing themselves on to them, but they were not able to modify these microbes in their vitality or virulence, whereas the phagocytes hindered the microbes from multiplying, killed them, and made them entirely disappear.

If they summed up the whole of those observations on immunity against infective agents they could not but conclude that that phenomenon was the result of a phagocytic action, that in other words immunity was a function of the cells. Those results might serve as a general rule of hygienic behaviour towards cellular elements. Those cells should be stimulated in their activity in order successfully to fight the germs of infection. Thus, in most of the methods of vaccination against microbial diseases a modification of the cells in that sense was being effected. Everything that might weaken the phagocytic action, like the tincture of opium, should be strenuously avoided. Although the phagocytes belonged to the most resistant elements of the body, yet it was not safe to count on their insensibility towards poisons. They were harmed even by small doses of opium. He called their attention to the influence of alcohol on immunity. It was well known that persons who indulged too freely in alcohol showed far less resistance to infectious diseases, especially to croupous pneumonia, than abstemious individuals. Not only opium and alcohol hindered the phagocytic action but a number of other substances regularly employed in medicine caused the same results. Even quinine, the prophylactic effect of which in malarial fevers was indisputable, was a poison for the white blood cells. One should therefore, as a general rule, avoid as far as possible the use of all sorts of medicaments and limit oneself to the hygienic measures which might check the outbreak of infectious disease. That postulate further strengthened the thesis that the future of medicine rested far more on hygiene than on therapeutics.

More than ten years ago it was shown that by injecting guinea-pigs with certain liquids it was possible to increase their resistance towards pathogenic microbes. That plan of enhancing the phagocytic action in general medical practice might with great advantage be employed by practitioners. The new method was already beginning to find its way into practice and was worthy of attracting general attention. A Paris surgeon, Raymond Petit, had decided to employ heated horse serum in his gravest operations and had continued making use of it in a series of abdominal and pleural operations. Several other surgeons had also followed his example and as the results had always been most satisfactory it was to be hoped that the method would soon come into general use. Mikulicz also endeavoured to introduce into surgery the use of substances increasing phagocytic reaction. To that end he practised subcutaneous injections of a solution of nucleinic acid 12 hours before operation. He (Professor Metchnikoff) thought that the method of injecting heated horse serum into the peritoneal or pleural cavity was

superior to that of Mikulicz; but both these methods must be regarded as most useful for protecting the tissues of the body when injured and weakened by operation. Evidently neither the use of serum nor of nucleinic acid were the last words of wisdom.

In analysing the mechanism of the influence of horse serum on the post-operative period they found no difficulty in coming to the conclusion that that influence was not brought about by an increase in the sensibilising substances or by a production of opsonins. The use of substances enhancing the phagocytic reaction in the protection of tissues which were subjected to operation was but the first step forward in the hygiene of the tissues. That subject would have to be extended to other cases where their living organs were threatened by microbes and where it was necessary to protect the former against the latter. With regard to that question they might rejoice that the foundation-stone of the hygiene of the tissues—i.e., the thesis that the phagocytes were the arms of defence against the infective germs—had at last been generally accepted.

LECTURE II.

The Hygiene of the Alimentary Canal.

If on examination of the blood a marked increase of the leucocytes was noted an infectious disease was thought of but there were cases in which leucocytosis occurred normally quite apart from any disease. Such an occurrence was that of the digestive leucocytosis. The analogy was so striking that one might be tempted to inquire whether the digestion of food was not also a kind of infection? The fact of the matter was that after meals a certain number of microbes penetrated through the intestine and found their way into the circulation. It seemed to be proved that microbes could penetrate into the blood by way of the intestine. Under natural conditions the wall of the intestine frequently enough was injured by sharp or hard particles of food, such as pieces of bone, the stony tissues of certain fruits, &c. An animal which was to be bled should first be made to fast and would then furnish a serum free from microbes. It was highly probable that the microbes of the digestive tract, which multiplied abundantly after every meal, found better opportunities of traversing the intestinal wall at that time than at any other period of the day. It was probable that in many diseased conditions which one was wont to attribute to intestinal intoxication an infection of the blood by intestinal microbes, more especially the bacillus coli, had really taken place, those microbes having invaded the body tissues through the wall of the bowels. Those results, which had been accumulated by science, proved that the intestinal wall was worthy of being made the subject of most careful hygienic consideration. Worms were so often found living quietly in the intestines and their hosts found to be in no way suffering through them that one had grown accustomed to consider them as almost or quite inoffensive. And yet that optimism was by no means justified. There could, of course, be no doubt that an intestinal worm need not impair health in any way, just as many mosquitoes, fleas, and ticks may prick man and animals without causing anything more than a transitory and not painful itching. But, on the other hand, it was equally certain that the bites of intestinal worms might cause just as much evil as the pricks of arthropoda carrying pathogenic microbes. That fact was best established by a study of appendicitis.

The number of cases of appendicitis in which entozoa, especially nematodes, were found would appear to be considerable, so far as one could judge from the literature upon that subject. The success which frequently resulted from vermifugal treatment in persons suffering from appendicitis proved the importance of the entozoa in that disease. It was very probable that the rôle of intestinal worms was not limited to the inoculation of the microbes of appendicitis. Goiard believed that they might also serve to transfer typhoid bacilli to the mucous membrane and thus be the cause of enteric fever. That supposition was a very probable one and it would have to be studied more precisely. Even in certain tumours the rôle of the entozoa would appear very probable. More recently Borrel had called attention to the presence of intestinal worms in the centre of tumours of mice, which he believed to be of intestinal origin. The whole of these data indicated that it was time to undertake a campaign against the entozoa, which would have to be conducted on similar lines to the war now waged against the mosquitoes and other microbe-carrying arthropoda.

In order to hinder the intestinal worms from penetrating into the human body it sufficed as a rule to keep careful watch over food-stuffs. The discovery that persons enjoying perfect health often harboured infectious germs dangerous to their surroundings had caused rather a disturbance in the rules of hygiene. Formerly examinations were mainly carried out on patients, as they were believed to be the principal source of contagion. Their beds, their linen, in short, everything that had come within their reach, was disinfected, but no attention was paid to the persons who were feeling well. At present efforts were directed to finding out among the latter class of people the "bacilli carriers," so as to bring to bear on them the precepts of hygiene. It was evident that hygienic measures destined to prevent contamination of the digestive apparatus must in the first place watch over everything that entered by the mouth. Food and drink should at least be boiled before being consumed. The temperature of boiling was insufficient for sterilisation—there always remained spores of bacillus subtilis and some others—but the ova of parasites and the pathogenic microbes would be destroyed almost without exception. Where pasteurisation of milk—i.e., heating to between 65° and 70° C.—was practicable it might well replace the process of boiling. The process of boiling should also be extended to vegetables. As it could not be doubted that salad, radishes, and other raw vegetables transmitted entozoa and pathogenic microbes, their surveillance from a hygienic point of view became indispensable. Washing these vegetables, even with boiled water, was not sufficient, and it was necessary at least to scald them with boiling water, or, better still, to boil them.

Among fruits it was principally strawberries which introduced parasites, ova, and infectious germs into the intestinal canal. It was therefore necessary to boil them. Even cherries, although growing on trees and far from the soil, should be carefully scalded or boiled, because the birds which took a bite out of them frequently contaminated them with contagious matter. It was, as a rule, wiser to eat fruits, so far as possible, in the form of jams. An idea was prevalent, not only among the general public but even among medical men, that raw or boiled eggs were an excellent food-stuff. But it was forgotten that the white of egg, which was elaborated in the oviduct, in the immediate vicinity of the cloaca, often contained microbes and occasionally even entozoa. There could be no doubt that the whipped cream of pastries, which sometimes caused very serious illness, owed its harmfulness to raw or insufficiently boiled white of egg. Not only was it most desirable to take no food that had not been heated up to between 65° and 100° C., or even higher, but it was often, especially at times of epidemics of cholera or other intestinal diseases, necessary to make sure that the food had not been touched by suspicious hands. To that end it was desirable to provide dishes heated by spirit-lamps, on which the food could be placed before consumption. Vegetables and strawberries might be grown under satisfactory hygienic conditions, so as to permit of their being consumed raw. To that end it would be necessary to watch scrupulously over the soil and the manure and to use only irreproachable water for the purpose of watering. Amongst the different varieties of strawberries the one called "capronel" might be very serviceable, for it grew so high that its berries did not touch the ground, besides being noticeable for its peculiarly fine flavour and smell.

In future, when hygiene would become more of a general habit, there would no longer be any need to insist on the use of sufficiently boiled food. But at present it was imperative for persons who wanted to carry out the precepts of hygiene to boil what they drank and adequately to cook their solid food. That was the only way to prevent the entrance into their digestive apparatus of harmful microbes and of parasites which opened up for those microbes a mode of entry. No one could deny that a system based on the principles above laid down would insure the body against all sorts of diseases of the digestive apparatus. Possibly it might even assist us at the same time to avoid certain maladies against which science of to-day was almost entirely helpless. The intestinal worms played an important part in the etiology of appendicitis by allowing pathogenic microbes to find their way into the mucous membrane. Now, those worms were most often introduced

by raw food, amongst which vegetables and certain fruits were of primary importance. The progress attained in the cultivation of those plants had led to their increasing consumption. Only at a comparatively recent date strawberries and some vegetables—e.g., lettuce—came into such general use that they could be procured all the year round. In those circumstances the frequency of intestinal worms was easily explained.

The relations between entozoa and tumours had been mentioned. Might not the entozoa serve as gates of entry for the hypothetical parasites of those tumours? Whilst the malignant tumours on the whole were becoming ever more frequent certain varieties of cancer were observed more rarely than formerly. Thus amongst those classes which observed care in the cleanliness of their skin cancer of the skin was observed only in quite exceptional cases and it had without a doubt become much rarer. By reason of that fact Czerny recommended as means of preservation against cancer rigorous cleanliness and perhaps also the giving up of all raw food. For a long time the principle had been laid down that in the feeding of infants the use of raw food should be avoided. That principle was suitable for every time of life and there was no reason why it should not be applied to adults and to aged people. Thus they might avoid so far as possible the entry into the body of the causes of all kinds of diseases.

But there existed yet another means of attaining that end. It consisted in modifying the flora of the alimentary canal by acclimatising to the intestine useful microbes. The first step in that direction had been taken during the last few years. Amongst the useful bacteria the place of honour should be reserved to the lactic bacilli. They produced lactic acid and thus prevented the development of butyric and putrefactive ferments which should be regarded as redoubtable enemies. It had been shown by an extensive series of experiments that certain lactic ferments easily accustomed themselves to live in the intestines and thus produced a beneficial influence by preventing putrefaction. Those same ferments helped to regulate the functions of the intestine and kidneys, rendering valuable service to the entire body. One could take such carefully selected lactic ferments either in milk that had become acid under their influence or in the form of a powder. Tissier employed them in the treatment of the various intestinal troubles occurring at any age. To that end he advised the use of cultures of lactic microbes made in lactose peptone water. As putrefaction in the alimentary canal represented one of the causes of the general wear and tear of the human body it was only natural to suggest the method as a means of combating it. That method might now be summed up in a few words—it consisted in the consumption of food-stuffs not contaminated with microbes or entozoa and in the introduction into the alimentary canal of an artificially cultivated bacterial flora, foremost among which were the lactic acid microbes.

SOCIETY OF ARTS.—A meeting of the Applied Art Section of the Society of Arts was held on May 29th at the Whitefriars Glassworks, Tudor-street, London, E.C., when Mr. Harry Powell read a paper on Glass Cutting. At the conclusion of the paper the visitors proceeded to a part of the works where tubing for clinical thermometers was being drawn in lengths of many yards at a time. This, of course, differs from ordinary glass tubing, not only in the fineness of the central aperture but also in containing a strip of white enamel against which the mercurial column is viewed. The production of decorative patterns on plain glass ware by the various processes of glass cutting was also shown in practical operation.

PRESENTATION TO A MEDICAL PRACTITIONER.—On May 19th Mr. D. MacGregor, L.R.C.P. & S. Edin., assistant to Mr. A. Scott, M.B., C.M. Glasg., was waited upon by a deputation representing the Broxburn Oil Company's employees and townspeople of Broxburn, Linlithgowshire, and presented with a purse containing 60 sovereigns as a token of respect on the occasion of his leaving the district. Mr. William Ritchie, J.P., made the presentation, towards which there were over 1000 subscribers. On the previous evening Mr. MacGregor was entertained by a number of friends in the Buchan Arms Hotel, when he was presented with a gold watch.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, May 23RD.

THE Council met again on Wednesday, May 23rd, Dr. DONALD MACALISTER, the President, being in the chair. Penal cases occupied the day.

The Case of Mr. William Harding Crowther.

In November last William Harding Crowther, registered as of 15, Bloomfield-road, Ealing, London, W., Lic. Soc. Apoth. Lond. 1876, Lic. Fac. Phys. Surg. Glasg. 1880, was summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you have systematically sought to attract patients by means of a series of advertisements in the *People* newspaper of an Institution for Stricture, &c., at 8A, Guilford-street, Gray's Inn-road, of which you are the surgeon and which is carried on for your private gain.

At the conclusion of the deliberation of the Council on the case in November the President announced the decision of the Council as follows:—

The Council have carefully considered the facts alleged against Mr. William Harding Crowther in the Notice of Inquiry and have found that they have been proved to their satisfaction; but they have adjourned the further consideration of the case until the next session in order that Mr. Crowther may have an opportunity of appearing before the Council and giving an account of his conduct in the interval. Meanwhile Mr. Crowther will be required to furnish at once a medical certificate in regard to his state of health.

Consideration of the facts proved against Mr. Crowther was now resumed.

The PRESIDENT stated that the certificate referred to had been received and was quite satisfactory.

Dr. HUGH WOODS represented the complainants—the London and Counties Medical Protection Society. Mr. Crowther was not able to attend but his wife appeared on his behalf. A letter which had been received from Mrs. Crowther was read, and in this it was explained that directly after he heard from the Council Mr. Crowther stopped in every way what was objected to. Mrs. Crowther added orally that her husband was quite prostrate and was not now fit to practise in any way. The lease of the Guilford-street premises had been disposed of.

The Council having deliberated *in camerâ*,

The PRESIDENT announced that the Council, having given careful consideration to this case, did not see fit to remove the name of Mr. Crowther from the Medical Register.

The Case of Dr. John Bate Bawden.

The Council then considered the case of John Bate Bawden, registered as of Mountain View, Blaenavon, Mon., M.B., Mast. Surg., 1884, M.D. 1886, Univ. Edin., who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

That you accepted and held until after you had received notice of the present complaint, the appointment of paid medical officer of the Blaenavon Tradespeople's Doctor's Fund, an association which systematically practises canvassing for the purpose of procuring patients.

Dr. BAWDEN appeared on his own behalf and the complainants were Mr. C. P. Skrimshire and Mr. A. B. Avarne.

In stating the case Mr. SKRIMSHIRE said the complainants had taken action for the honour of the profession. They wished to approach the case with no animus and with as little self-interest as possible. Early in December, 1905, the committee of the Tradespeople's Doctor's Fund approached Mr. Avarne and himself stating that it had received 186 signatures in favour of its scheme, but knowing that the committee had systematically canvassed most of the tradesmen and their private patients he and Mr. Avarne both in turn refused the appointment of surgeon. The complainants took steps to secure that no practitioner should be induced to become a candidate without a reasonable opportunity of being made acquainted with the real nature of the appointment. Directly after the appointment of Dr. Bawden, who arrived on Jan. 29th, an active canvass took place and Dr. Bawden's name was printed on the back of the contribution cards. On Feb. 13th a friendly warning was sent to Dr. Bawden by the secretary of the Monmouth division of the British Medical Association and on the 23rd a notice warning him of his position was sent by the secretary of the Medical Defence Union. Neither of these communications was

acknowledged. Dr. Bawden, who was said to have severed his connexion with the fund, commenced a personal canvass and issued letter-cards bearing the date of May 9th—that was to say eight days after he received a request of explanation from the Registrar. He contended that Dr. Bawden could have severed his connexion with the fund in February when he received warning.

Mr. AVARNE read his statutory declaration, which generally supported the statement of Mr. Skrimshire. He said one of the letter-cards sent to a patient of his own, and dated May 9th, contained these words:—

In consequence of certain spiteful complaints that have been made to the General Medical Council, Dr. Bawden has had to sever his connexion with the Blaenavon Tradespeople's Doctor's Fund. He has undertaken to attend the patients as usual. The payments must be made to him personally and he will be glad to receive the same this week at his residence.

Dr. BAWDEN said he admitted sending out such a card.

Mr. SKRIMSHIRE identified a similar card sent to one of his patients.

Statutory declarations by other persons having been submitted,

Dr. BAWDEN, in his defence, said he would have brought witnesses if he could have afforded to do so to prove that certain false statements were circulated about himself. With regard to the warning that had been referred to, he said he could not see the use of such a warning when he had undertaken certain engagements. On the matter of canvassing he had no wish to disobey the Council but it was a difficult thing for a poor man with a family to sit down and starve. Even for the medical man with money it was difficult nowadays to make a living out of his practice.

Replying to questions, he said that he did receive a circular on Feb. 14th but he had no warnings before he took up the appointment. He had not seen any notices in the newspapers or the medical papers. He heard of the vacancy from a person who advised him to write to one of the persons connected with the fund. A statement had been signed by a number of members of the fund to the effect that he had warned them before and after his appointment that they must not canvass. With regard to sending cards to the persons belonging to the fund after its dissolution he said it was a question of doing that or starving. He would have had nothing to live on if he had not notified the people who were subscribers to the fund and the people whom he had attended. He had taken steps to stop the canvassing by mentioning it to the committee and saying that it must not be done.

The Council having sat *in camerâ* to consider its decision,

The PRESIDENT announced that it was his duty to inform Dr. Bawden that the Council after careful consideration had come to the decision that the facts alleged against him in the notice of inquiry had been proved to the satisfaction of the Council. The Council had adjudged him to be guilty of infamous conduct in a professional respect and had directed the Registrar to erase from the Register the name of John Bate Bawden.

The Council adjourned till the following day.

THURSDAY, MAY 24TH.

The Council resumed on Thursday, May 24th, Dr. MACALISTER, the President, being in the chair.

Charge against Dentists.

The Council resumed the consideration, adjourned from December last, of the facts proved against John Jones Atwood, Thomas Rose Smart, Walter Bennett, Montague Alex Levason, and Daniel Shea, whose names all appear on the Dentists Register as "in practice before July 22nd, 1878," and who were connected with the company of Guy White and Co., Limited. At the conclusion of the proceedings on Dec. 1st the President announced *seriatim* that in the cases of John Jones Atwood, Thomas Rose Smart, Walter Bennett, Montague Alex Levason, and Daniel Shea the further consideration of the charge against them had been postponed until the next session of the Council, of which due notice would be given them, and at which they would be expected to be present.

All now attended before the Council except Mr. Smart. The British Dental Association, the complainants, were represented by Mr. R. W. Turner, counsel instructed by Messrs. Bowman and Curtis-Hayward, solicitors.

Mr. ALLEN, the registrar, read the following report of the Dental Committee:—

On May 18th, 1906, the following parties attended before the committee and were duly heard—namely, Mr. John Jones Atwood, accompanied by his solicitor, Mr. Woodhouse; Mr. Montague Alex Levason; Mr. Daniel Shea. The complainants, the British Dental Association, were represented by their counsel, Mr. Turner, instructed by Messrs. Bowman and Curtis-Hayward, solicitors. The Dental Committee was satisfied that notice of the inquiry was duly sent to Mr. Smart and Mr. Bennett as prescribed by the Standing Orders. The committee find that the following facts were established by the evidence: The said J. J. Atwood, T. R. Smart, W. Bennett, M. A. Levason, and D. Shea have all severed their connexion with G. Guy White and Co., Limited, the company their association with which was the subject matter of the complaint, and none of them has since had any connexion with this or with any other similar company. Resolutions for the winding-up of the company have been passed and registered at Somerset House.

The PRESIDENT said that the facts could not be gone into but if any of the parties desired to be heard on the report they might address the Council.

Mr. SHEA said that he did not think he could add to his former statements.

Mr. TURNER said that he accepted the statement of facts contained in the report of the Dental Committee; he was satisfied that the accused practitioners had severed their connexion with the company.

After deliberation *in camerâ*,

The PRESIDENT, addressing the parties, said: The Council having further considered the charge against John Jones Atwood (or Thomas Rose Smart, or Walter Bennett, or Montague Alex Levason, or Daniel Shea) and the reports of the Dental Committee thereon does not judge you guilty of infamous or disgraceful conduct in a professional respect.

Erased from Dentists Register.

Consideration was then given to the following report of the Dental Committee on the charge against George Charles Smith:—

The complaint against George Charles Smith having been referred to the Dental Committee to ascertain the facts, the Dental Committee beg to report as follows:—On May 18th, 1906, the inquiry was held. The accused practitioner did not appear personally or by a representative. The Dental Committee was satisfied that notice of the inquiry was duly sent to Mr. Smith as prescribed by the Standing Orders. The Committee find that the following facts were established by the evidence or by the admissions of the accused practitioner. The accused practitioner is on the Dentists Register as in practice before July 22nd, 1878, and his address in the Register is 153, High-street, Lewisham, London, S.E. Mr. Smith has been in practice as a dentist at Lewisham for the last 21 years and claims to have the largest practice in South London. Mr. Smith recently entered into an arrangement with a Mr. Farkasch for the purpose of extending his practice by a system of canvassing by paid canvassers organised and superintended by Mr. Farkasch. The canvassers distributed documents from house to house containing order forms for signature addressed to Mr. Smith, with schedule of charges for dental operations and for supplying artificial teeth, and subsequently called to solicit signatures to these order forms and to receive deposits in respect thereof. The canvassers on these visits examined the mouths of persons who permitted them and advised them as to their requirements and gave estimates of cost. From 12 to 20 persons were employed to canvass for Mr. Smith's dental practice. Mr. Farkasch is not a qualified dentist but he carries on a dental practice under the name of the "Hygienic Institute" at Glasgow and elsewhere by a similar system of canvassing and carries on the practice by unqualified assistants. For the purpose of organising the system of canvassing on behalf of Mr. Smith Mr. Farkasch opened an office at 142, High-street, Lewisham, opposite Mr. Smith's surgery, and Mr. Smith's name appears on this door as well as on Mr. Smith's surgery. Mr. Smith employs unqualified assistants at 153, High-street aforesaid, who are in the habit of conducting dental operations on patients at Mr. Smith's surgery and extract teeth at the private residence of patients who have signed orders in the form above mentioned. Mr. Smith states that he does not wish to defend his right to remain on the Register.

When the case was called Mr. Smith did not answer to his name. The complainants, the British Dental Association, were represented by Mr. R. W. Turner, as in the last case.

Mr. ALLEN having read the report of the Dental Committee,

Mr. TURNER said he did not wish to say anything except that this appeared to be a very bad case and that Mr. Smith's desire not to remain on the Register should be gratified.

After the Council had deliberated *in camerâ* Mr. Smith attended.

The PRESIDENT addressed him as follows: On the facts found in the report of the Dental Committee it has been proved that you have been guilty of conduct which is infamous and disgraceful in a professional respect and the Council directs the Registrar to erase from the Dentists Register the name of George Charles Smith.

Mr. SMITH: I should like to know what you consider disgraceful conduct.

The PRESIDENT: The case is now closed and I have announced the decision.

Mr. SMITH: Is that all you require?

The PRESIDENT: I have informed you of the decision of the Council.

Mr. SMITH: Very good; thank you.

This ended the proceedings.

Another Dental Case

The next business was the consideration of the following report of the Dental Committee:—

The complaint against William MacGregor Veitch, L.D.S. R.C.S. Eng., and Thomas Wafer Byrne, L.D.S. R.C.S. Eng., L.D.S. F.P.S. Glasg., having been referred to the Dental Committee to ascertain the facts the Dental Committee beg to report as follows. On May 18th, 1906, the inquiry was held. The accused practitioners appeared and were represented by counsel and solicitor. The committee find that the following facts were established by the evidence: (1) The practitioners complained of are on the Dental Register with the qualifications above set forth—Mr. Veitch at 112, Prince's-road, Liverpool, and Mr. Byrne at 2, Prince's-road, Liverpool. (2) Mr. Veitch and Mr. Byrne respectively carried on practice as dentists in their own names at their registered addresses, but they also carried on a dentist's practice under the name of Entwistle Bros., Ltd., at 218A, London-road, Liverpool, and also at Seacombe. They were the only two directors and Mr. Veitch was the secretary of the company and with nominal exceptions they held the whole of the shares. (3) Mr. Veitch and Mr. Byrne purchased the goodwill of this business from the representatives of deceased dentists of that name who had carried on a dental practice for many years previously. The company employed an expert advertiser of the name of Kelly who had complete control of the advertising department. The company issued advertisements and circulars of an objectionable character and containing claims of superiority over other practitioners. (4) The company employed an unregistered assistant named James Kermode Goldsmith, who attended patients and performed dental operations at 218A, London-road, aforesaid. Mr. Goldsmith was registered as a dental student in July, 1894, and had passed all his examinations except the final examination and had gone through a course of practical dentistry at the Dental Hospital. Mr. Veitch or Mr. Byrne attended daily at the premises in London-road, with which they were in telephonic communication, and they superintended or performed the more serious operations. Their instructions to Mr. Goldsmith were to do the mechanical work of an unqualified assistant but Mr. Goldsmith did not, as he admitted, in practice follow these instructions but performed dental operations under gas administered by himself on his own responsibility. (5) Both Mr. Veitch and Mr. Byrne retired from the directorship and parted with their shares in the company on April 2nd, 1906. The complaint against them was made on April 27th and they were asked by the Registrar for an explanation on April 30th. In reply to the complaint and when under examination they expressed their unqualified regret for their mistaken conduct and contended that the advertisements were directed against unqualified competitors.

Mr. Veitch and Mr. Byrne were present before the Council and the complainants, the British Dental Association, were represented by Mr. R. W. Turner.

After the report had been read by Mr. ALLEN,

Mr. VEITCH addressed the Council on his own behalf. He submitted that his conduct had been straightforward and honourable in connexion with the company and that he was innocent of any professional conduct that could be described as infamous or disgraceful. There was an enormous amount of uneducated dentistry, particularly in Lancashire, and he and his colleague considered that they were conferring a boon on the public in doing what they had done. If their conduct had been of an unprofessional nature they extremely regretted it. He added that their private practice had been kept apart from the company and had been carried on with the strictest professional etiquette.

Mr. BYRNE said that if he were to say anything he would only repeat what Mr. Veitch had said.

Mr. TURNER addressed the Council in support of the complaint and

Thereafter the Council deliberated *in camerâ*.

The PRESIDENT announced that the Council had given careful and prolonged attention to this case and had decided that on the facts found in the report of the Dental Committee the accused dentists had been adjudged guilty of conduct which was infamous or disgraceful in a professional respect and the Registrar had been directed to erase their names from the Dental Register.

The American Dental Institute, Limited.

The Council proceeded to the consideration of the report of the Dental Committee on the charge against Isidore Clifford, Ruby Edmund Clifford, Walter Clifford, and Stanley Clifford in regard to whom the Dental Committee had found that the following facts were established by the evidence:—

The practitioners complained of are all on the Dentists Register as at 20, Grosvenor-street, London, W., and as in practice before July 22nd, 1878. All the accused practitioners joined in forming and are the principal shareholders and the only directors of a limited company named "The American Dental Institute, Ltd.," incorporated under the Companies Acts for the purpose (*inter alia*) of promoting the adoption of advanced American and other scientific methods of dental surgery, which company carries on dental practice at divers addresses in London, Manchester, and Liverpool. That in such practice the company employs unregistered assistants (namely, Mr. Skrimshire, Mr. Robertson, Mr. McCormick, Mr. Kennedy, Mr. McDermid, and Mr. Storey, all using the title of doctor) to attend patients and perform dental opefations upon them. That the company systematically advertises extensively by pamphlets of an objectionable character and containing claims of superiority over other practitioners and depreciation of them. The accused practitioners by their counsel also did not dispute the accuracy of an article in the *Review of Reviews* which sets out at great length within quotation marks an interview with one of the directors of the company, containing scandalous and highly objectionable remarks with regard to English dentists and dentistry. The accused practitioners by their counsel undertook that the company (of which they are practically the whole of the shareholders) should be dissolved; that neither they nor the company would employ any persons contrary to the resolution of Council of Nov. 24th, 1882, and further that they and the company would discontinue all advertisements of every kind.

Mr. Turner appeared on behalf of the British Dental Association, instructed by Messrs. Bowman and Curtis-Hayward, solicitors.

The defendants were represented by Mr. Warmington, K.C., and Mr. Wilkinson, instructed by Messrs. Frank Richardson and Sadlers, solicitors.

Mr. WARMINGTON said the accused parties desired through him to express their profound regret that they had been found guilty of professional misconduct. It was far from their wish to reflect upon their fellow practitioners. They felt deeply the disgrace that it should have been thought that they intended especially in connexion with the *Review of Reviews* to make odious charges against their profession. They wished to give an undertaking that they would make the utmost amends for their conduct. They desired henceforth to obey the rules of professional conduct which had been laid down by the Council for the good of the profession.

Mr. TURNER said he apprehended that Mr. Warmington would desire to add that his clients wished to withdraw the allegations they had made.

Mr. WARMINGTON: Certainly.

Mr. TURNER said this was a serious case and was one of the leading advertising cases in the kingdom. Here they found the advertisement stating one thing, the actual practice being entirely different.

The Council having sat *in camerâ*,

The PRESIDENT announced that the Council after careful investigation had come to the following decision—that on the facts found in the report it was proved that the accused dentists had been guilty of conduct which was infamous or disgraceful in a professional respect and it had directed the Registrar to remove their names from the Dentists Register.

Sight testing Opticians Bill.

The Council received the following recommendations from the Executive Committee in regard to a communication from the British Optical Association and in regard to the Sight-testing Opticians Bill. On May 21st the Executive Committee resolved that the Council should be recommended to adopt the following motion:—

That the Lord President of the Privy Council be informed that the Council have carefully considered the petition and the Bill submitted to them and are of opinion that it would be dangerous in the public interest to confer the privileges and powers contemplated therein on persons other than those duly qualified in medicine and surgery; that the Council trust that the sanction of Parliament and of the Privy Council will be withheld from these proposals; and submit the accompanying memorandum, which has been approved by the Council, as setting forth the grounds on which their objections are based.

It was agreed to consider first the former part of the motion dealing with the petition and the Bill.

Dr. NORMAN MOORE, in moving the adoption of the first recommendation, said it was clear that something should be done in the matter. The body which had been endeavouring to obtain this power had put out feelers in a great variety of directions. He would like to express his admiration for the extremely able memorandum which had been prepared.

Sir VICTOR HORSLEY, in seconding the motion, said the petition and the Bill went further than the circumstances warranted and they aimed at such power as would enable persons wholly unqualified to examine the eyes. The reservations were inadequate and he thought the Council ought to express its knowledge of the fact that those persons had been advertising as unqualified ophthalmic practitioners and that the Bill and petition were the crystallisation of their previous action.

The PRESIDENT said Sir Victor Horsley had rightly referred to the fact that through the Privy Council these documents had been sent to the General Medical Council for its opinion. Some years ago they had reason to complain that sometimes things affecting the medical profession were dealt with by Government offices of which they had no cognisance. In consequence of a request from the Council he had succeeded in persuading the authorities that on any document which seemed to touch the medical

profession they should have the opportunity of seeing it at an early stage. He had to acknowledge the courtesy of the various offices and the Secretaries of State in this matter.

The first part of the recommendation was adopted unanimously.

The PRESIDENT said that with regard to the second part of the recommendation, if the Council approved of the general tenour of the memorandum it might send it to the Lord President at once before making it public and as a matter of courtesy agree at a later sitting to enter it upon the minutes.

Dr. PYE-SMITH moved the adoption of the second part of the recommendation.

Mr. MORRIS seconded the motion.

Dr. SAUNDBY said he had been fighting the battle of the medical profession against the Optical Association and the Spectacle Makers' Company for several years past and had published a great many articles stating the position of the case. Opticians in different parts of the country advertised themselves as Fellows of the Spectacle Makers' Company or as diplomates of the British Optical Association. They advertised themselves in the newspapers or by cards in which they claimed to be able to treat all forms of refractive errors and so on. This no doubt led to a good deal of business and practitioners who practised in diseases of the eye complained that a great many people went to those men under the belief that they were competent to correct all errors of refraction. Although it was admitted that this was not the right thing to do those bodies still allowed their diplomates or Fellows to go on advertising in this way. With regard to the memorandum he thought the first paragraph was not judicious. The term "optician" had been used as a trade name for 60 or 70 years or more by the people who sold spectacles and he thought they had better let it stand and not cavil at the term. It was admitted that in the interest of the public people who had no knowledge of medicine should not be allowed to use mydriatics and if that was so they were unable to do what they set themselves out as able to do.

Sir VICTOR HORSLEY thought that the Council ought to be careful how they approached the legislature by memorandum. He thought the people concerned were entitled to the name of opticians. But by that title they sought to do two things. They sought to improve their knowledge of optics for the purpose of improving their manufacture of spectacles. That was a perfectly *bonâ fide* intention and in approaching the legislature he thought they ought to refer to that as a thoroughly laudable ambition on their part. But they went further and said that they were capable of investigating and correcting any common error in refraction. He would direct the attention of the Council to two memoranda—one published by the Royal College of Surgeons of England, an excellent summary of the objections to the proposals of those persons, and the other issued by the Medico-Political Committee of the British Medical Association. The history of ophthalmology at present under consideration was also most important but he thought it ought to be supplemented by special references to the justifiable desire of the opticians to improve their optical knowledge and to the impossibility of carrying out what they purported to do because of the impossibility of allowing them the use of mydriatics.

Mr. THOMSON said that he was in general agreement with the memorandum but he suggested a minor alteration.

The PRESIDENT said that the question was raised whether the document should be rewritten. The Bill might come on at any moment for second reading and it was necessary to know what the observations of the Council were. He suggested that Dr. Saundby and Sir Victor Horsley should supply him with materials of new paragraphs and he would endeavour to incorporate them.

The recommendation was then adopted with the addition of the words "subject to such modification as may be agreed upon."

Poisons and Pharmacy Bill.

The following letter having been read, it was agreed, on the motion of Dr. NORMAN MOORE, seconded by Sir THOMAS MYLES, that it should be received and entered on the minutes:—

26, Brechin-place, South Kensington, May 22nd, 1906.

DEAR DR. MACALISTER.—I am writing as President of the Pharmaceutical Society of Great Britain to draw the attention of the General Medical Council to the amendment which was recently carried in the House of Lords on the Poisons and Pharmacy Bill, to the effect that a company or body corporate, composed of unqualified persons, may use the title of chemist, provided they employ a person who is qualified under the Pharmacy Acts.

This decision, if allowed to become law, may have far-reaching results, not only to chemists but also to dentists, medical men, and others where a personal qualification is required by law.

I hope the General Medical Council may see fit to exert their great influence to protest against such a new departure, and I have the honour to invite that Council to take such steps as they deem necessary to impress upon the Government and the Houses of Parliament the danger to the public and the injustice to qualified persons, of such proposed legislation.—I am, yours very faithfully,

R. A. ROBINSON,
President of the Pharmaceutical Society of Great Britain.

Dr. MacAlister, President, General Medical Council.

Mr. TOMES moved—

That the President be requested to inform the Lord President of the Privy Council that, in the opinion of this Council, the principle involved in the Poisons and Pharmacy Bill, as amended in the House of Lords, whereby corporate bodies are permitted to assume professional titles, which, in the case of individuals, cannot legally be assumed by any but those who are personally qualified by training, examination, and registration, is fraught with danger to the public, inasmuch as it tends to impair the safeguards provided by the Medical, Dentists, and Pharmacy Acts.

He said that the Government had introduced into the House of Lords a Poisons and Pharmacy Bill which was partly designed to carry into effect the recommendations of a Departmental Committee on the sale of poisons. The measure also embodied some clauses which, he believed, were introduced at the instance of the Pharmaceutical Society with the object of amending its Act, particularly in the direction of preventing company practice. As the Bill originally stood there was a clause in it which rendered the companies liable just as though they were individuals, to the prohibitory clauses of the Pharmacy Act. In the House of Lords an amendment was moved which sounded very harmless, the effect of which, however, was anything but harmless. It gave a legal authority to a chemists' company to make use of the title "pharmaceutical chemist" or "chemist and druggist" so long as it employed at each of its places of business a qualified and registered pharmaceutical chemist. A company, of course, might have a fancy title or the name of a man so long as the word "Limited" was appended, but it was a complete giving away of the restriction of the title implying qualification of the person who possessed it. It was legalising a title acquired through examination in the case of a corporate body which could not be in a proper position to use it. The tone of the debate in the House of Lords had made it rather important that the General Medical Council should make some representation on the subject because the advocates of the Bill and its opponents also did not seem to realise in the least the effect of what was being done. In the first place it was said in advocacy of the Bill that it was a matter that did not concern the public. The idea that those Acts which put prohibition in the way of using titles were of no service to the public but were only a protection to the holders thereof was actually put forward by an advocate of the Bill. Those measures, he (Mr. Tomes) would say, which were beneficial to the profession were also, but in a much greater degree, of benefit to the public. The importance of giving away a title to somebody who could not properly possess it seemed not to have been realised. It was therefore desirable that the General Medical Council should make some sort of representation to the Privy Council, pointing out that certain aspects of the question had dropped out of sight.

Sir JOHN W. MOORE, in seconding the motion, said that there were some serious provisions in the Bill that had not been alluded to. The Bill enabled persons other than those hitherto qualified to sell poisons in all parts of the United Kingdom. As an after-thought the measure was extended to Ireland. In that country the duty of making representations as to what should be deemed poisons under the Sale of Poisons (Ireland) Act had been intrusted by the State to the Royal College of Physicians of Ireland, and this Bill, it appeared, would supersede that power. It was very likely therefore that the Bill would be strongly opposed by the Royal College of Physicians of Ireland. He considered that it was a most dangerous thing to intrust to local authorities the duty of licensing people to sell poisons.

Sir VICTOR HORSLEY, in supporting the motion, said the General Medical Council must express itself in perfectly plain and unequivocal language.

Dr. SAUNDBY said he could not agree with the view that a chemist's shop could not be fairly carried on as a purely commercial affair provided that there were duly qualified men in charge. It must be desirable to make it statutory that over the shop should be displayed the name of the responsible

manager. What they had to do in the case of the pharmaceutical chemist was to take care that the people who actually carried on the business were properly qualified and that there was no evasion of the Pharmacy Act. There were some quite respectable chemists' businesses that were carried on by companies.

The PRESIDENT said at the present moment no individual person, whether capitalised or not, could call himself a pharmaceutical chemist and druggist unless he had passed examination after due education and been properly registered as such. If he did so use those names he was liable to punishment. As amended but not as introduced this Bill enabled a company of unregistered, unqualified, and untrained persons to assume those titles and exempted them from punishment of any kind. If this Bill passed in its present form the professional titles which were forbidden to individuals might be assumed by the companies. The principle touched them all, because if it were applied by Parliament to medicine it would be quite possible for a company to be started with the title, say, of "Dr. Saundby, Ltd., Physicians."

After further discussion,

Mr. LUSHINGTON, K.C., legal adviser to the General Medical Council, suggested that the motion should be framed in the following words:—

That the President be requested to inform the Lord President of the Privy Council that, in the opinion of this Council, the principle involved in the Poisons and Pharmacy Bill, as amended in the House of Lords, whereby corporate bodies are permitted to assume professional titles, which titles no member or director of such company need be personally qualified by training, examination, and registration to assume, is fraught with obvious and extreme danger to the public.

Mr. TOMES accepted the suggestion and the motion so amended was agreed to.

Assistant Examiner in Surgery.

On the motion of Sir HUGH BEEVOR, seconded by Mr. MORRIS, Mr. Edward Percy Paton, F.R.C.S. Eng., M.D. Lond., was appointed Assistant Examiner in Surgery to the Apothecaries' Society of London for a period of four years, *vice* Mr. Steward, who retires by rotation.

Surgical Examiners.

Dr. ADYE-CURRAN moved—

That, in consideration of the heavy expense entailed on the Apothecaries' Hall, Dublin, by the appointment of the Surgical Examiners from London and Edinburgh respectively, the Council resolve that in future these examiners be appointed from amongst the profession practising in Dublin.

He said some years ago an inspection was ordered by the Council of the Apothecaries' Hall of Ireland, which he had the honour to represent, and fault was found by the inspectors with the manner in which that examination was conducted. The Apothecaries' Hall of Ireland was one of the oldest licensing bodies in the United Kingdom and he had no hesitation in admitting that at that time the examination in question was not up to date or strictly in accordance with more modern ideas. Immediately on receipt of that report, however, the Hall set about putting its house in order and readily adopted and put into practice every suggestion thrown out by the Council, so much so that he was happy now to be in a position to state that since the report referred to every subsequent one had been most satisfactory and every examination without exception had been inspected, and in the report on the January examination Sir Henry Howse stated that he saw no necessity for an inspector to attend the April examination. This state of affairs was no doubt a source of satisfaction to all parties, but what he was most concerned about at present was the fact that although other bodies, more powerful perhaps than the Hall, had been inspected and unfavourably reported upon they nevertheless had been granted an interval of repose wherein to make good their shortcomings, but in the case of their Cinderella sister the inspections had been made perennial, or he might more correctly say permanent, and this in spite of the recommendations of the Executive Committee. This state of affairs which, so far as he could ascertain, was without precedent or parallel in the annals of the General Medical Council, was one which had done incalculable injury to the Hall in scaring away candidates and one which he confidently appealed to their love of justice and fairplay as Englishmen no longer to enforce. A still further penalty had, unwittingly or otherwise, been imposed on the body which he represented. No doubt many of them were aware that the report in question had the further effect of dissolving the conjoint examinations between the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland, and, as a consequence, causing the appointment of surgical examiners by the Council at a remuneration of £5 per diem and travelling allowances. This expenditure imposed on the Hall came to over £100 per annum, as one of the examiners hailed from London and the other from Edinburgh. He did not, however, wish to be taken as finding any fault with the gentlemen in question; on the contrary, they had always conducted their examinations with the greatest courtesy and satisfaction. The Apothecaries' Hall of Ireland had paid this penalty for a considerable number of years without murmur or complaint and he thought they would agree with him when he said that in all fairness the time had come when this heavy and unnecessary expense might be removed and what had hitherto been regarded by the profession in Ireland as an unmerited slight might be rectified by the appointment of these examiners from amongst the many distinguished members of the profession in that country. He would be happy to mention two or three names if it were thought fit to make a selection of gentlemen who would be glad to act as surgical examiners.

Sir THOMAS MYLES, in seconding the motion, said that the examinations conducted by the Apothecaries' Hall had in recent years been all that could be desired and the Hall was under a disadvantage in the matter of expense.

The PRESIDENT said that any proposal that might be made by responsible persons as to a particular examiner whose status was recognised would be accepted by the Council. He understood that Dr. Adye-Curran would wish his motion to take effect when the next vacancy occurred.

Dr. ADYE-CURRAN agreed with the President and said that in view of what had been said he would ask leave to withdraw his motion.

The motion was withdrawn.

Navy, Army, and Indian Medical Services.

On the motion of Sir P. HERON WATSON, seconded by Dr. NORMAN MOORE, the following report by the Examination Committee on the returns as to examinations for the services received by the Council on Tuesday, May 22nd, was received and entered on the minutes:—

The Committee have analysed the returns and the following is the result:—

MEDICAL DEPARTMENT OF THE ROYAL NAVY.

Twenty-seven candidates submitted themselves at the examination; seven were rejected. The English Conjoint Board supplied eight candidates (one was also a graduate of the University of London); all passed. The Scottish Conjoint Board supplied two candidates; both rejected. The Irish Conjoint Board supplied six candidates; three rejected. The Apothecaries' Society of London supplied one candidate; passed. The University of Durham supplied one candidate; passed. The University of London supplied one candidate; passed. The University of Edinburgh supplied one candidate; passed. The University of Glasgow supplied three candidates; one rejected. The Royal University of Ireland supplied one candidate; rejected. First place won by English Conjoint and University of London candidate. Second place won by University of Edinburgh candidate. Third place won by University of Glasgow candidate. Fourth place won by English Conjoint candidate. Fifth place won by English Conjoint candidate.

ARMY MEDICAL SERVICE.

Sixty-two candidates submitted themselves at the examination; four were rejected. The English Conjoint Board supplied 23 candidates (one was also a graduate of the University of London); all passed. The Scottish Conjoint Board supplied two candidates; one rejected. The Irish Conjoint Board supplied 11 candidates; two rejected. The Society of Apothecaries, London, supplied one candidate; passed. The University of Birmingham supplied one candidate; passed. The University of Edinburgh supplied six candidates; all passed. The University of Glasgow supplied two candidates; both passed. The University of Aberdeen supplied one candidate; passed. The University of Dublin supplied nine candidates; one rejected. The Royal University of Ireland supplied six candidates; all passed. First place won by the University of Glasgow. Second place won by the English Conjoint Board and University of London. Third place won by the Royal University of Ireland. Fourth place won by the University of Edinburgh. Fifth place won by the English Conjoint Board.

INDIAN MEDICAL SERVICE.

Forty-four candidates submitted themselves at the examination; five were rejected. The English Conjoint Board supplied eight candidates (one was F.R.C.S. and one also a graduate of the University of London); all passed. The Scottish Conjoint Board supplied eight candidates; five rejected (one was F.R.C.S. Edin. and also an Indian or Colonial graduate). The Irish Conjoint Board supplied one candidate; passed. The University of Durham supplied one candidate; passed. The University of London supplied three candidates; all passed. The Victoria University of Manchester supplied two candidates; both passed. The University of Edinburgh supplied 13 candidates; all passed. The University of Glasgow supplied two candidates; both passed. The University of Aberdeen supplied one candidate; passed. The University of Dublin supplied two candidates; both passed. The Royal University of Ireland supplied five candidates; all passed.

The Indian and Colonial Universities supplied two candidates (one included above); one rejected. First place won by the English Conjoint Board (F.R.C.S.). Second place won by the University of Glasgow. Third place won by the University of Edinburgh. Fourth place won by the English Conjoint and University of London. Fifth place won by the Scottish Conjoint.

SUMMARY.

Candidates for Navy Medical Service ...	23
,, ,, Army ,, ,, ...	62
,, ,, Indian ,, ,, ...	44
Total	129 Rejections, 16

	Candidates.	Rejection.
English Conjoint Board	39	None.
Scottish Conjoint Board	12	8
Irish Conjoint Board	18	5
Society of Apothecaries	2	None.
University of Durham	3	,,
University of London	4	,,
Victoria University of Manchester ...	2	,,
University of Edinburgh	20	,,
University of Glasgow	7	1
University of Aberdeen	2	None.
University of Dublin	11	1
Royal University of Ireland	12	1
Indian and Colonial	2	1

Mr. BROWN, seconded by Dr. BRUCE, moved that copies of the report be sent to the various qualifying bodies but the motion was rejected.

Quatercentenary of the University of Aberdeen.

Sir THOMAS FRASER moved—

That the President and Treasurers be requested to prepare a suitable congratulatory address to be presented to the University of Aberdeen on the occasion of the celebration of the 400th anniversary of that University, which the President had been invited to attend.

Sir P. HERON WATSON seconded the motion which was agreed to.

The Council adjourned to Friday.

FRIDAY, MAY 25TH.

The Council sat again on May 25th, the PRESIDENT being in the chair.

The Case of Dr. Alexander Lane.

Consideration was given to the case of Alexander Lane, registered as of Saville Chambers, Newcastle-on-Tyne, Mem. R. Coll. Surg. Eng. 1880; Lic. Soc. Apoth. Lond. 1880; Fell. R. Coll. Surg. Irel. 1893; M.D. Univ. Durh. 1899, who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you sold to Mr. Ellis Pearson a medical practice at Bideford which was not a genuine, *bond-fide* saleable goodwill and practice, but was a practice fraudulently built up by you for the purpose of sale.

Dr. Lane was present together with Mr. F. W. Hill, his solicitor. Dr. Bateman appeared for the complainants, the Medical Defence Union. Mr. Ellis Pearson was also in attendance.

At the outset a question was raised as to whether it would be necessary to go into the whole case *ab initio* and it was decided with general consent to commence with the summing-up of the judge in the action for damages—Pearson *v.* Lane.

Mr. PEARSON gave evidence as to the verdict, which was to the effect that the practice was not a genuine saleable goodwill and practice and that the practice was built up for sale. Damages were assessed at £200.

Dr. LANE also went into the witness-box. He said, in answer to Dr. BATEMAN, that he had been in practice for 25 years. Mr. Pearson had received from him, in reference to costs and damages, about eighteenpence in the pound. That was all he could pay; he had been ruined over the case and had had no chance of paying more.

In reply to Mr. HILL the witness mentioned an offer of a composition which he had made to Mr. Pearson, whose solicitor, however, refused it and pressed on bankruptcy proceedings. It was that Mr. Pearson should be paid, in addition to retaining the practice, £200 and that he should be allowed to collect certain book debts which were not included in the purchase. That was about a month after the verdict.

Mr. HILL, in his address to the Council on behalf of Dr. Lane, declared that no one who read the summing-up of Mr. Justice Lawrance could believe that this was a case of infamous fraud. What the jury seemed to think was that there had been exaggeration and that they had to assess what was a reasonable price for the business. He claimed that the report of the official receiver with regard to Dr. Lane's case was favourable and that the period for which his discharge was suspended on the appeal from the decision of the county-court judge was the minimum period applicable to such a case. If there had been at the outset of this dispute a little concession on one side or the other the whole of this trouble might have been avoided. In effect the result of the proceedings was that Dr. Lane had asked Mr. Pearson for £1000 and the jury decided that he ought to have had £800. If that were to be used in such a way as to put an end to Dr. Lane's professional career the Council would be stretching its statutory powers further than the legislature intended.

Dr. BATEMAN, in reply, said that the complainants based their complaint on the verdict and the decision of the High Court judges. Dr. Lane had practically told the Council that he relied on the summing up of the judge which apparently was in his favour but the jury decided that the sale of the practice was not *bond fide* and genuine and that it was built up for sale and they had assessed the damages at a certain amount.

After the Council had deliberated *in camerâ*,

The PRESIDENT announced that the Council had given careful consideration to the case and had resolved that the facts alleged against Dr. Lane in the notice of inquiry had not been proved to the satisfaction of the Council.

Dr. LANE said that he was exceedingly obliged.

The Case of Dr. James Brander.

The Council proceeded to the consideration of the case of James Brander, registered as of 44, Leadside, Northfield, Aberdeen, M.B., Mast. Surg., 1876, Univ. Aberd., who had been summoned to appear before the Council on the following charge:—

That you were on the 15th day of February, 1906, convicted of the following crime or offence at Aberdeen police court—namely, of drunkenness and riotous behaviour.

Dr. BRANDER did not appear but he had sent a letter in which he stated that he had been a tempernte man all his life, although at times he might have stepped over the border. He was now 60 years of age and working hard for a living and it was not likely that he would ever trouble them again. Drink had never put him a day off duty and he was not conscious of doing anything to disgrace the profession to which he belonged.

The SOLICITOR having read the certificate of conviction and notes of previous convictions which had been obtained from the Aberdeen police authorities,

The PRESIDENT said that English cases were reported to the Council by the proper authorities but in regard to the present case it was important to mention that no report had reached the Council previously to the charge they were now considering.

Dr. FINLAY said it was very odd that there should have been previous offences without notice being sent. Perhaps the Home Secretary's attention should be called to the matter.

The PRESIDENT said he proposed to call the Home Secretary's attention to the fact.

The Council having deliberated *in camerâ*,

The PRESIDENT announced that it had been resolved that James Brander having been proved to have been convicted of a crime or offence in Scotland, the Registrar should be directed to erase his name from the Medical Register.

The Council adjourned to the following day.

SATURDAY, MAY 26TH.

The Council met again on Saturday at 1 o'clock, the PRESIDENT being in the chair.

Poisons and Pharmacy Bill.

Mr. TOMES asked the President whether he had communicated the resolution of the Council relating to the Poisons and Pharmacy Bill to the Privy Council and whether a covering letter had been sent with it.

The PRESIDENT said that he had communicated the resolution by a letter which he had sent on Thursday evening. After stating the terms of the resolution he wrote:—

I may add that the feeling of the Council in the matter was that if the principle above referred to were once sanctioned by Parliament in a particular case it would tend seriously to impair the safeguards against unqualified practice which in the public interest have been provided by the Medical and Dentists Acts.

On the motion of Mr. TOMES it was agreed to place the letter on the minutes.

The Case of Dr. Hamlet Lloyd Davies.

The Council proceeded to the consideration of the facts proved on Nov. 30th, 1905, against Hamlet Lloyd Davies, registered as of 2, Crofton-street, Great Western-street, Rusholme, Manchester, M.B., Mast. Surg. 1874, Univ. Edin., who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you have accepted and continued to hold the appointment of paid medical officer to the Rusholme and District Provident Dispensary, an association which systematically practises canvassing for the purpose of procuring patients.

At the conclusion of the deliberation of the Council on the case on Nov. 30th, 1905, the PRESIDENT announced that the Council had come to the conclusion that the facts alleged against Dr. Davies in the notice of inquiry had been proved to the satisfaction of the Council, that the Council felt it its duty to express its sense of the gravity of the facts which had been proved against him, but in order to give him an opportunity seriously to reconsider his position in relation to the Rusholme and District Provident Dispensary it had adjourned the further consideration of the charge until the next session, when he would have to appear and satisfy the Council as to his conduct in the interval.

The case was to have been considered on Wednesday but Dr. Davies did not then appear and the proceedings were adjourned to Saturday when he answered in person a renewed notice to attend.

Dr. DAVIES stated that he had resigned the post of medical officer to the Rusholme and District Provident Dispensary and was now manager in a cash practice at Salford.

After the Council had deliberated *in camerâ*,

The PRESIDENT informed Dr. Davies that it did not see fit to direct the Registrar to erase his name from the Register.

Practitioner Restored to the Register.

The PRESIDENT announced that the Council had directed the Registrar to restore to the Medical Register the name of William Patrick Kirwan, L.R.C.P., L.R.C.S. Edin.

Report on Cycle of Inspections.

On the motion of Sir P. HERON WATSON, seconded by Mr. YOUNG, the following report of the Examination Committee was received and entered on the minutes:—

The remit to the committee was as follows of date May 26th, 1905: "That it be remitted to the Examination Committee to prepare and present to the Council at its May Session next year a general report on the whole cycle of visitations and inspections of the Final Examinations."

The Examination Committee reports to the Council as follows:

1. Within the past five years the Final Examinations of all the qualifying bodies have been inspected and all of them either on a first or a second inspection have been pronounced by the inspectors to be "sufficient" within the meaning of the Medical Act of 1886. The Examination Committee of the Medical Council adopted the conclusions of the inspectors and the Medical Council adopted the reports of the Examination Committee, and thus the Council has pronounced officially that all the final examinations so inspected are "sufficient."

2. A review of the inspectors' reports shows considerable diversity in the methods of conducting the examinations and in the standard of knowledge required. Some examinations are just "sufficient," others are certainly more than sufficient, and a few are considerably above a mere pass-mark. As all the inspectors' reports are in the hands of all the examining boards this committee refrains from classifying into grades the different examinations, but undoubtedly some do no more than attain to a bare sufficiency. Many of the candidates who pass at some of the boards would apparently be rejected at others.

3. The criticisms of the inspectors on the examination of each board have been fully considered by each board and although there has been in some instances considerable reluctance in admitting justification for the inspectors' animadversions, the probable result will be that when the next inspection takes place the inspectors' reports will have led to substantial improvement.

4. The Council's recommendation that two examiners should conduct the examination in any stage of it is frequently disregarded. It is true that no rejection takes place unless by the consent of two examiners, but it is far from certain that in all cases where pass-marks have been given by one examiner a colleague would have concurred. No two examiners can have quite the same mental appreciation of a candidate's answers in such subjects as medicine and surgery; therefore the concurrence of at least two examiners should be required equally to pass or reject. The committee is of opinion that this recommendation of the Council should be urged by the Council on all the qualifying boards.

5. In the written examinations some boards do not carry out the Council's recommendation that half an hour should be allowed on an average for the answer to each written question. In the opinion of the committee this rule should be rigidly enforced.

6. The committee is of opinion that in regard to medicine and surgery every examination should be so devised as to show the candidate's acquaintance with pathological processes either in the written or the oral parts of the examination. The inspectors call attention to the circumstance that at some boards no evidence of knowledge of ophthalmology was required.

7. The clinical examinations are conducted in hospital wards by all the boards except two; at these two boards patients are brought to the examination rooms. Generally the clinical examinations have been conducted satisfactorily both in medicine and surgery. In one instance on a first inspection the examination was reported as having been unduly hurried; at the second inspection ample time was allowed. In another instance the presence of strangers in the wards was stated to have interfered with the work; on a further visit the inspector was satisfied with the examination.

8. The examinations in practical surgery were generally satisfactory, although it was remarked that at some boards the display of instruments and apparatus might have been more comprehensive. All the boards require skin markings of operation incisions on the living subject.

9. As regards examination in operative surgery on the subject, some boards exact this from every candidate, others from selected candidates only, and some boards do not require it at all. One inspector commends such examination, another reprobates it and urges that the time might be more usefully employed. This committee is of opinion that examination in operative surgery on the subject is a valuable test of the candidate's knowledge of surgical anatomy and of his manipulative skill, and the committee believes that by having such examination in prospect the student will devote more time and attention to practical surgical procedure than if no such test be in front of him.

10. Some boards are without special examiners in medical jurisprudence and hygiene and do not set a special paper on these subjects, but leave it to the examiners in medicine, surgery, and midwifery to ascertain as they may think fit the student's acquaintance with these subjects. This committee is of opinion that these important departments should have special examiners.

11. Each of the three Irish boards conduct a well-devised and searching practical examination in ophthalmology. Only one British board has such an examination. The Irish example deserves to be commended and followed.

12. Two boards only have instituted a special practical examination in mental disease at an asylum.

13. At some of the boards certain of the examiners take part in all the stages of the examination in medicine or surgery—the written, the clinical, the practical, and the oral—thus insuring that each candidate has been by at least one examiner followed from beginning to end of the examination on the subject. At other boards no such procedure is provided and seldom, if ever, does any one examiner see the written, the clinical, and the oral of any candidate throughout.

14. Some boards require a candidate to enter for all the subjects of the final examination at one time. Other boards allow of entry for one of the subjects at a time. Where the latter practice is adopted and where a board that requires entry for all subjects at once gives credit for one or two subjects when there has been a failure in the other subjects or subject this committee is of opinion that at least 10 per cent. more than a mere pass-mark should be exacted.

15. One board separates the systematic examination in medicine and surgery from the clinical examination by an interval of some months, the clinical being the final or pass examination. There is much to be said in favour of this arrangement as the student in the interval may devote himself entirely to clinical and practical work.

16. One board allows a candidate to receive pass marks for the systematic or the clinical examination in surgery independently of each other. He must enter for both but may pass in systematic surgery and not in clinical surgery and *vice-versâ*, and be only examined at a future time in the branch in which he failed. This committee is of opinion that a pass-mark should not be allowed in clinical work if there has been failure in the systematic examination.

17. The Examination Committee commends the method of regarding systematic medicine and surgery respectively as separate subjects from clinical medicine and surgery, and is of opinion that failure in clinical medicine or surgery should not be compensated by excellence in the systematic branches.

18. At one board no curriculum of study has yet been prescribed. The Medical Act of 1858 requires sufficiency of "study" as well as of examination.

This committee makes no observations on the examination in midwifery, as a special committee of the Medical Council is at present considering all that pertains to the teaching of practical midwifery.

The number of qualifying bodies has been added to since the inspection was determined on by the foundation of new Universities in Liverpool, Leeds, and Sheffield.

The Victoria University, at the time of the inspection of its final examination, included as constituent colleges the several colleges at Manchester, Liverpool, and Leeds.

It was agreed to take the paragraphs separately and in each case Sir P. HERON WATSON, seconded by Dr. CATON, moved the approval of the paragraph.

Paragraphs 1, 2, 3, and 4 having been approved,

Sir T. M'CALL ANDERSON asked whether the committee's opinion in Clause 5 was due to some of the boards allowing too short or too long a time for answers.

Sir P. HERON WATSON: Too short a time.

Sir T. M'CALL ANDERSON moved as an amendment that the words "at least" should be inserted before "half an hour."—This was agreed to.

Mr. THOMSON said he did not think the Council had power to enforce this rule and he moved that the last five words be deleted and substituted by the words "recommendation of the Council should always be followed."

Mr. MORRIS seconded the amendment which was agreed to.

The paragraph as amended was then approved.

On paragraph 6,

Sir CHRISTOPHER NIXON thought that there was some difficulty in the matter. In some cases the examination in pathology was dealt with under medical, surgical, and

gynæcological pathology, and there might be a danger of overlapping if the committee's opinion was adhered to.

Dr. NORMAN MOORE remarked that it was an overlapping that was desirable.

The PRESIDENT said that at Cambridge they had an examination first of all in general pathology and the candidate was examined in special pathology in the final examination as an integral part of the examination.

Dr. MCVAIL said that the Examination Committee was of opinion that the questions should be so set that pathology would not be omitted in any one examination.

Mr. JACKSON moved to add the words "otology or laryngology" after "ophthalmology." It was important, he said, that the medical man should have some knowledge of those subjects.

Dr. KIDD seconded the amendment.

Mr. YOUNG said that the inspectors did not call attention to otology.

Sir THOMAS MYLES said that the question arose whether they were going to raise all those subjects into special subjects of study. This attempt to make every board have questions on specific subjects was ridiculous.

Sir P. HERON WATSON said that the Examination Committee regarded the examining boards as being possessed of common sense. No doubt ample attention would be paid to a variety of subjects and the student not knowing what would be taken up would be led in that way to attend to them.

Dr. MCVAIL remarked that the inspectors repeatedly called attention to the fact that there was no question about ophthalmology and, in their opinion, a knowledge of it was essential to the ordinary practice of medicine and surgery.

Mr. JACKSON'S amendment was lost and the paragraph was approved.

Paragraphs 7, 8, and 9 were approved.

On the tenth paragraph,

Dr. MCVAIL expressed the opinion that there should be attached to every great examining board a person who knew hygiene thoroughly.

Sir THOMAS FRASER considered that hygiene and medical jurisprudence ought to be under the care of experts.

Dr. SAUNDBY said he felt that what had been done by the Conjoint Board had always been quite satisfactory. In the examination of medicine there was always somebody among the examiners who must be considered an expert. In that way quite sufficient expert assistance was obtained and they did not want to add another barrier to the student getting on the Register. They wanted to see him sufficiently educated in the ordinary departments of medicine, surgery, and midwifery. All teachers felt that the student was at present overburdened and they did not want to increase the difficulties by having more special examinations. They wanted to keep the qualifying examination as simple as possible and they did not wish special examiners in those additional subjects.

Dr. MACKAY proposed as an amendment to substitute for the latter sentence in the paragraph—

> This committee is of opinion that a special paper should be set in these important departments.

He thought that the ordinary medical man ought not to go into practice without some elementary knowledge of public health and the simple principles underlying medical jurisprudence. These two subjects were widely separated from ordinary medicine and surgery and ordinary examiners would not feel bound to put them into examinations. They would not get these subjects examined at all unless there were special examinations.

Sir JOHN W. MOORE thought that Dr. Saundby had overlooked a very important fact, which was that on June 6th, 1890, the General Medical Council resolved that among the subjects which must be contained in every course of medical study and examination were forensic medicine and hygiene.

The PRESIDENT pointed out that that was not all. There was at the same time a declaration that it was to be understood that the Council offered no opinion as to the manner in which those subjects should be combined or distributed for the purpose of teaching or examination. That was the principle on which the Council had acted.

Dr. LITTLE reminded the Council that a diploma in public health was in existence.

Dr. LINDSAY STEVEN, in supporting Dr. Mackay's amendment, said that in Scotland they found no difficulty whatever in finding experts to examine in medical jurisprudence and hygiene.

Sir CHRISTOPHER NIXON said he could not understand how a body like the General Medical Council could try to minimise the value of hygiene as a subject of medical curriculum or examination. They ought to have examiners who were experts in the subject and they ought to increase the value of the subject in the medical curriculum.

Dr. NORMAN MOORE said it was essential that a person should know that part of hygiene which was directly bound up with his professional work, but the duties of a medical officer of health were a totally different subject and the special examiner came in there and was provided for in connexion with the special diploma. When forensic medicine was begun as a part of the medical curriculum it excited intense interest but it had not increased in importance. A knowledge of all that had been written and said upon it was confined to a very few, but every man who was likely to be appointed an examiner had had abundant experience of that part of it which was concerned in the practice of their profession. With regard to these subjects he was sure it was much better to leave the examining bodies to choose their own way of teaching.

Dr. BRUCE considered that the note appended to the resolution of the Council to which the President had referred implied that the subjects were to be taught and examined upon. He was sorry he had to take this position, because he believed the curriculum was overloaded; but it was their duty to stand by their own recommendation. He would therefore support the amendment.

On a show of hands Dr. Mackay's amendment was rejected.

Dr. NORMAN MOORE moved to substitute for the latter sentence in Paragraph 10 the words: "This committee is of opinion that every candidate should be examined in these important subjects."

Mr. JACKSON seconded the amendment.

Dr. MCVAIL said the committee undoubtedly meant that there should be special examiners. He thought the words should stand as they were in the paragraph.

Dr. NORMAN MOORE'S amendment was defeated.

Sir JOHN WILLIAMS, seconded by Mr. MORRIS, moved that the latter sentence in the paragraph be omitted.

Dr. MCVAIL said this was a matter of extreme importance. If the committee's recommendations were rejected it would be an intimation to the important medical schools in Scotland that in future they need not trouble to hold any special course of study or examination in forensic medicine or hygiene as they were not to be specially examined upon. This would amount to a complete revolution.

The amendment was rejected.

Dr. NORMAN MOORE said that the Council was really going to make a deliberate addition to the burdens of the intending practitioner and this ought only to be done after full discussion. He therefore moved that Clause 10 be omitted.

Sir JOHN WILLIAMS seconded the amendment which was defeated by a large majority and the clause was allowed to stand as approved.

Clauses 11, 12, and 13 having been approved,

It was agreed to alter Clause 14 so that the final words should read:—

> This committee is of opinion that at least 10 per cent. more than a mere pass mark of 50 per cent. should be exacted.

On Clause 15,

Dr. MCVAIL said the Council ought to understand that the arrangement referred to was something new and that the committee considered it an admirable arrangement.

Dr. MACKAY asked how long the interval was.

Dr. MCVAIL said that in the case referred to it was three months.

Dr. NORMAN MOORE said that anything which would tend to lead the student to think that what he learned by attending lectures and what he learned in the wards were two separate subjects was surely to be deprecated.

Sir VICTOR HORSLEY moved that the second sentence in the paragraph be omitted. This was a new thing more or less and while it might be recorded it was not necessary for the Council to express its approval of it.

Dr. BRUCE seconded the amendment.

Dr. MCVAIL said the committee wanted to get an expression of opinion from the Council and that was why they had included the matter in their report.

The amendment was carried and the second part of the clause was struck out.

Several amendments were suggested on Clause 17 but the PRESIDENT suggested the following substituted clause which was agreed to:—

The Examination Committee is of opinion that no candidate should be allowed to pass the final examination who has failed in clinical medicine and surgery and is further of opinion that failure in that subject should not be compensated by excellence in systematic branches.

Dr. LINDSAY STEVEN moved that the second sentence in Clause 18 be struck out. He said it was not required and it was expressing an opinion by a side wind.

Sir VICTOR HORSLEY, in seconding the amendment, said that the side wind might prove a gale.

Dr. MCVAIL said that the Examination Committee found in the visitor's and inspector's report regarding one body that there was no curriculum of study. The committee had therefore reported it to the Council. He was surprised that it should have struck some members that it was put in with some unpleasant object. He would be quite willing to leave out the second sentence.

This was agreed to and the clause as amended was approved.

It was agreed, on the motion of Mr. MORRIS, seconded by Sir THOMAS MYLES, that a copy of the report should be sent to each of the licensing bodies.

The Fifth Year of Study.

Dr. BRUCE moved:—

That it be remitted to the Education Committee to consider how far Recommendation V. of the General Medical Council, viz.—"that the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognised by any of the medical authorities mentioned in Schedule (A) of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities"—is at present being given effect to, and if the committee sees fit to recommend to the Council such changes in the said resolution as would be likely more effectually to secure the object aimed at by the Council in 1890.

He said he feared it was notorious that although the resolution of the General Medical Council required that the fifth year should be given over to clinical work this rule in most cases was almost wholly nugatory. It was merely, so to speak, a pious opinion on their part with the result that the practical side of the future medical practitioner's training was forced into the background and the theoretical side was unduly exalted. The only cure, so far as he was aware, yet suggested for this unfortunate state of things was that of Dr. Lindsay Steven and other reformers before him—to add another year to the present course of purely professional studies by putting certain ancillary studies outside the curriculum and in this way to gain the additional time necessary for practical work. While he approved of such a change he feared that it would not help matters much. The same system of overlapping would almost certainly continue. In discussing this subject with his constituents he had come to see that to get at the real root of the difficulty of obtaining the due amount of time for clinical study the proper plan was not to postpone clinical work until the student had learned the principles but to start off immediately with practice and to wed practice and principle together. Let them set the young student, if not to the bedside, to the out-patient department; place him under tutorial care; teach him to observe for himself; and as soon as possible make him put his own hand to what was to be his life's work. No one who had taken the trouble to think on the best form of medical education could avoid looking back to the old apprenticeship system with, in many respects, feelings of regret. It might be well to meet two objections which had been mentioned to the reform of clinical teaching here advocated—first, the dearth of clinical matter at most schools with the rash jostling of the advanced student by his immature junior; and secondly, the risk of losing hold of the latter by allowing him to wander about from ward to ward and from bed to bed without proper supervision. Both dangers might be avoided by clinical training in strict form on the lines of similar teaching by lecturers or professors and by making it part and parcel of a large extension of tutorial work. Having divided the students into proper divisions they might hand over the junior classes to assistant teachers. These would be the best of the newly passed men, ready for a small remuneration to undertake such work and would be in the position of teachers and learners. It must be plain enough by this time that it was impossible to crowd every special subject into the ordinary medical curriculum and that post-graduate study was almost an absolute necessity if the coming practitioners were to be as well trained as they would wish. What better arrangements, he asked, than those suggested could be thought of to secure so desirable an object? It might be said that they as a Council had hitherto refrained from laying down the precise lines and the right course of medical studies. Yes, but they had declared for a final year of clinical work. It was their duty if they had made a mistake to retrace their steps and to abandon the position by declaring for early study and continuous practical training during the whole course of the candidate for registration as a duly qualified medical practitioner. The opportunity of practical work under the supervision of a practitioner qualified for the duty had, so far as he knew, never once been taken advantage of by any student of medicine and it was never likely to be and the sooner such a recommendation disappeared from the list of their requirements the better.

Dr. MACKAY said the Education Committee would be glad to have this remit for careful consideration. In view of the important matters already before the Education Committee he hoped it would not be unduly hurried in carrying out the present remit, which was of the most vital importance. He did not altogether agree with Dr. Bruce but it was not necessary now to go into details. He hoped the motion would be carried so that the Education Committee would be allowed to take up the matter.

The motion was then agreed to.

Report of the Pharmacopœia Committee.

On the motion of Dr. NORMAN MOORE, seconded by Dr. LINDSAY STEVEN, the following report of the Pharmacopœia Committee was received and entered on the minutes:—

From Nov. 21st, 1905, to May, 19th, 1906, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 516. The total number of copies sold in the year was 1150. Up to the present date 37,584 copies of the Pharmacopœia and 4410 copies of the Indian and Colonial Addendum have been sold. The stock of the Pharmacopœia remaining on hand now consists of 2447 copies, with 1954 copies of the Addendum. No new impression will therefore be necessary for some time to come.

The Secretary of State for the Colonies has forwarded to the committee a number of useful suggestions for the revision of the Pharmacopœia from the Joint Committee of the Medical and Pharmaceutical Societies of Victoria and also a report from New Zealand on the same subject. Other suggestions bearing on pharmacopœal unification have been received from Holland. The new Pharmacopœias of the Netherlands and of the Austrian Empire have been received. Each adopts the conclusions as to potent drugs and preparations arrived at by the Brussels Conference of 1902. These conclusions have now been finally embodied in an international agreement, entered into between the British Government and the authorities of the other Powers.

The chairman of the Committee of Reference in Pharmacy nominated by the two Pharmaceutical Societies of the United Kingdom states that sub-committees for various branches of investigation have been formed and are at work. Reports on the progress made may be expected before the next meeting of the Council.

Other Committees.

On the motion of Dr. NORMAN MOORE, seconded by Mr. MORRIS, the members of the Pharmacopœia Committee and the Finance Committee were re-appointed to these committees.

The Council adjourned to Monday.

MONDAY, MAY 28TH.

On Monday the revised Standing Orders for the visitation and inspection of qualifying examinations were submitted to the Council and remitted to the Executive Committee to redraft in accordance with the resolutions arrived at after close debate. A valuable report was received upon the extent to which the midwifery practice required of medical students is carried out: this will be publicly circulated. The Finance Committee reported an improved financial position. An interesting discussion upon the necessity of increasing the number of Direct Representatives upon the Council concluded the business of the session. The Council proved to be on the whole unfavourable to the reform.

MEDICAL MAGISTRATES.—The magistrates for the Bedwellty Division of Monmouthshire on May 25th elected Mr. William Edwin Williams, F.R.C.S. Edin., M.R.C.S.Eng., L.S.A., as chairman, in the place of the late Mr. John Davies James, M.R.C.S.Eng., L.S.A.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8549 births and 4293 deaths were registered during the week ending May 26th. The annual rate of mortality in these towns, which had steadily declined in the five preceding weeks from 17·3 to 14·5 per 1000, further fell last week to 14·2 and was lower than in any previous week of this year. During the first eight weeks of the current quarter the death-rate in these towns averaged 16·1 per 1000; in London the average rate in the same period was 16·2, and in the 75 provincial towns 16·0 per 1000. The lowest death-rates during last week in the 76 towns were 5·4 in Willesden, 6·2 in Leyton, 6·8 in East Ham, 7·7 in Walthamstow, and 7·8 in Hornsey; the rates in the other towns ranged upwards to 19·8 in Bootle and in Burnley, 19·9 in Stockport, 20·3 in Middlesbrough, 20·7 in Salford, and 24·8 in Yarmouth. The 4293 deaths in the 76 towns showed a further decline of 98 from the numbers in recent weeks and included 441 which were referred to the principal epidemic diseases, exceeding by 20 the number in the previous week; of these, 161 resulted from measles, 118 from whooping-cough, 47 from scarlet fever, 47 from diarrhœa, 44 from diphtheria, 24 from "fever" (principally enteric), and not one from small-pox. The deaths from these diseases were equal to an annual rate of 1·5 per 1000 in the 76 towns and to 1·3 in London. No death from any of these infectious diseases was registered last week in Hastings, Southampton, Devonport, Wigan, Warrington, Huddersfield, Northampton, or in ten other large towns, whereas they caused death-rates exceeding 3 per 1000 in Middlesbrough, Manchester, Bootle, Liverpool, Rotherham, Yarmouth, and Burnley. The highest death-rates from measles occurred in Liverpool, Manchester, Gateshead, Yarmouth, and Burnley; from whooping-cough in Derby, King's Norton, Merthyr Tydfil, and Reading; from scarlet fever in Hornsey and Rochdale; and from diphtheria in King's Norton. Diarrhœa caused the greatest fatality in St. Helens and Middlesbrough; and two deaths were referred to "fever" in Rotherham and in Blackburn and three in Manchester. Two cases of small-pox were under treatment in the Metropolitan Asylums hospitals at the end of last week, no new case having been admitted during the week. The number of scarlet fever cases under treatment in these hospitals and in the London fever hospital on Saturday, May 26th, was 2453, showing a further increase upon the numbers in recent weeks; the 338 new cases admitted during the week exceeded those in the previous week by 37. The deaths referred in London to pneumonia and other diseases of the respiratory organs, which had declined in the five preceding weeks from 399 to 244, further fell last week to 212 but exceeded by one the corrected average for the corresponding week in the four preceding years, 1902–05. The causes of 33, or 0·8 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Leicester, Manchester, Salford, Oldham, Bradford, Leeds, Hull, Cardiff, and in 49 other large towns. The proportion of uncertified deaths showed, however, an excess in Birmingham, King's Norton, Liverpool, Rochdale, Blackburn, Rotherham, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 18·8 and 17·6 per 1000 in the two preceding weeks, further declined to 17·3 in the week ending May 26th, but exceeded by 3·1 the mean rate during the same week in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·1 and 12·8 in Perth and Aberdeen to 17·4 in Paisley and 19·0 in Glasgow. The 592 deaths in the eight towns showed a decrease of 11 from the number in the previous week, and included 13 which were referred to whooping-cough, 13 to diarrhœa, 12 to measles, four to scarlet fever, two to "fever," one to diphtheria, and not one to small-pox. In all, 45 deaths resulted from these principal infectious diseases, showing a further decline of 13 from the numbers in recent weeks. These 45 deaths were equal to an annual rate of 1·3 per 1000, which was 0·2 below the mean rate during the week from the same diseases in the 76 English towns. The 13 fatal cases of whooping-cough included eight in Glasgow and two in Edinburgh. Of the 13 deaths referred to diarrhœa seven were returned in Glasgow, three in Edinburgh, and two in Dundee; and of the 12 deaths from measles nine occurred in Glasgow and two in Edinburgh. The four fatal cases of scarlet fever occurred in Edinburgh, and the two deaths referred to "fever" (including a fatal case of cerebro-spinal fever) in Glasgow. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 109 and 131 in the two previous weeks, declined last week to 96, and were 11 below the number in the corresponding week of last year. The causes of 24, or more than 4 per cent., of the deaths registered in the eight towns last week were not certified, the proportion of uncertified causes of deaths in the 76 large English towns during the same week being only 0·8 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been 25·9, 21·7, and 21·6 per 1000 in the three preceding weeks, rose again to 22·4 in the week ending May 26th. During the first eight weeks of the current quarter the death-rate in the city averaged 23·3 per 1000, against 16·2 in London and 18·3 in Edinburgh. The 163 deaths of persons belonging to Dublin registered during the week under notice showed an increase of six upon the declining numbers in recent weeks; they included six which were referred to the principal infectious diseases, against eight and two in the two preceding weeks. These six deaths from the infectious diseases included three fatal cases of whooping-cough and three of diarrhœa, whereas no death was referred to small-pox, measles, scarlet fever, diphtheria, or "fever"; the six deaths were equal to an annual rate of 0·8 per 1000, the rate from the same diseases last week being 1·3 in London and 1·7 in Edinburgh. The 163 deaths in Dublin last week included 24 of infants under one year of age and 52 of persons aged upwards of 60 years; the deaths of elderly persons showed an increase of 12 upon the number in the previous week. Five inquest cases and four deaths from violence were registered, and 76, or 47 per cent., of the deaths occurred in public institutions. The causes of seven, or 2·5 per cent., of the deaths in the city were not certified either by a registered medical practitioner or by a coroner, the proportion of uncertified causes of deaths in London being only 0·3 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Surgeons have been promoted to the rank of Staff Surgeon:—Henry Cadman Whiteside, Robert Lumley Dickinson, Herbert Wells Bayly Shewell, John Martin, Christian Beverley Fairbank, Harold John Chater, Reginald St. George Smallwood Bond, Claude Bromley Gittings, Ramsey Martyn Richards, and Alan Grant Eastment (dated May 23rd, 1906).

ROYAL ARMY MEDICAL CORPS.

Surgeon-General Sir Thomas J. Gallwey, K.C.M.G., C.B., will succeed Surgeon-General W. H. Macnamara, C.B., C.M.G., as Principal Medical Officer at Aldershot. Surgeon-General W. L. Gubbins, C.B., M.V.O., will probably succeed Sir Thomas Gallwey as Principal Medical Officer on the Headquarters Staff in India. Major C. R. Elliott on returning from India is appointed for duty at Fermoy.

Lieutenant-Colonel F. J. Lambkin, who, as we have already announced, has been given the brevet rank of Colonel under Articles 36 and 356 of the Royal Warrant of March 19th, 1906, has for many years devoted himself to the study and treatment of syphilis, contributing largely to the literature on the subject. An original article by him appeared in the Army Medical Report for 1890, wherein he advocated a method of treatment which has since become established.

HONOURABLE ARTILLERY COMPANY OF LONDON.

Surgeon-Major R. J. Reece to be Surgeon-Lieutenant-Colonel (dated May 14th, 1906).

ROYAL ARMY MEDICAL CORPS (MILITIA).

Wilson Ranson to be Lieutenant (dated May 26th, 1906).

VOLUNTEER CORPS.

Rifle: 5th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Major J. A. Gray (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, 2nd Lothian Volunteer Infantry Brigade), to be Surgeon-Lieutenant-Colonel (dated May 26th, 1906). 1st Volunteer Battalion the Buffs (East Kent Regiment): Percy Charles Burgess to be Surgeon-Lieutenant (dated May 26th, 1906). 3rd Volunteer Battalion the Devonshire Regiment: Surgeon-Captain E. R. Tweed resigns his commission (dated May 26th, 1906).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Sherwood Foresters Bearer Company: Ernest Arnold Wraith to be Lieutenant (dated May 26th, 1906).

PHYSICAL TRAINING IN THE NAVY.

A correspondent writes: "Reports upon the working of physical training followed in sea-going ships having been under consideration, the Admiralty has decided to substitute schemes of training and exercises in lieu of those at present in force. While the existing scheme of training is well suited to the needs of the younger 'ratings' under 21 years it requires to be modified so as to be adapted to the requirements of the older men, for whom physical exercise is essential rather for the maintenance of their bodily and mental fitness than for the building up of a healthy and vigorous constitution, as in the case of young men and boys. The existing arrangements have, therefore, been slightly altered and so modified as to form the basis of physical training and daily exercise in all ships and establishments."

INDIAN MEDICAL SERVICE.

An examination for not less than 20 commissions in the Indian Medical Service will be held in London on Tuesday, July 24th, 1906, and the four following days. Further particulars and the necessary forms for application can be obtained from the Military Secretary, India Office, London, S.W.

THE CADET MOVEMENT.

As may be gathered from what has been so frequently said in THE LANCET, we regard the movement in favour of military service for our national defence as a wholesome sign of the times which we would gladly see spreading and developing itself, because it would serve to indicate that the apparent apathy with which the people view their duties and responsibilities to the State in this respect was being gradually overcome. But apart from any patriotic feeling it has to be borne in mind that the adoption of a system of military training is also well calculated to improve the physical health and vigour of those who take part in it. Archdeacon Wilberforce recently told the cadets of the Civil Service Corps in his sermon on the occasion of their being present at Divine service in Westminster Abbey that he disagreed with a resolution passed by the Peace Society to the effect that the cadet movement was inimical to the interests of peace and brought the worst influences to bear upon the character and upbringing of the youth of the nation. It was the Archdeacon's opinion, on the contrary, that he could conceive of no training better calculated to make boys live upright and sober lives.

Correspondence.

"Audi alteram partem."

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE SOCIETY OF MEMBERS OF THE COLLEGE.

To the Editors of THE LANCET.

SIRS,—I much regret that you should have inserted Dr. W. G. Dickinson's letter *re* the College of Surgeons without any repudiation of the sentiments therein expressed. Dr. Dickinson is honorary secretary of the Society of Members of the Royal College of Surgeons of England and therefore occupies a position of peculiar responsibility with respect to the subject-matter of his criticisms. Implicitly or explicitly he makes the following grave charges, to which he endeavours to give an air of verisimilitude—viz.: (1) that the President and Council of the College of Surgeons offered a bribe to the Clerk of the Privy Council; (2) that the bribe was accepted; and (3) that in consequence corrupt opinion and advice was given to the Prime Minister who was thereby duped.

As if these charges were not sufficiently base he makes the immoral suggestion—ridiculous, it is true, but still immoral in purpose and intent—that an attempt should be made either to extort by private threats political concessions from the individual members of the Council of the College, or, if this expedient should fail, to punish individual members by a professional boycott, because, acting in their capacity as members of the governing body of the College, they "deny" what Dr. Dickinson calls the "corporate rights" of the Members of the College. Corporate rights, whether many or few, the Members of the College possess and may freely enjoy, but the "rights" which Dr. Dickinson hypothesises are equally non-existent in the custom and in the constitution of the College and in law. (See Steele *v.* Savory.)

I would suggest that it is only reasonable to ask that the Clerk of the Privy Council and the Prime Minister should have an opportunity of seeing Dr. Dickinson's letter published in last week's issue of THE LANCET.

I am, Sirs, yours faithfully,

Harley-street, London, W., May 26th, 1906. JOHN TWEEDY.

*** Dr. Dickinson's letter purported to give the views of a society with whose objects we have always been in sympathy. It was therefore inserted, though manifestly silly and vulgar. We have sent copies of THE LANCET of May 26th to the Prime Minister and to the Clerk of the Privy Council.—ED. L.

THE ABUSE OF COCAINE AND ADRENALIN.

To the Editors of THE LANCET.

SIRS,—Cocaine and adrenalin are both excellent for the purposes for which they are generally employed, but if given to patients to use frequently do much more harm than good. For some reason or other the profession does not appear to be alive to this fact, as is shown by the following four very marked cases which, amongst others, have come under my notice.

CASE 1.—A woman, aged 58 years, consulted me in the summer of 1902 for chronic conjunctivitis and some refractive trouble. My servant, before he showed her to my consulting-room, informed me that he thought the woman was a little cracked, because each time he had been to the waiting-room he found her bathing her eyes from a small saucer. She appeared armed with a saucer, a bottle, and a small piece of sponge; the bottle was labeled lotion for the eyes and was from the prescription of a leading ophthalmic surgeon; it was a solution of cocaine. Both eyes looked bleary, the ocular conjunctiva was injected and the insides of the lids were red and velvety; there was very little discharge. The condition was what I recognise as due to the continued application of cocaine or adrenalin and which, for want of a better name, I have called cocaine eye. I advised the patient to leave her lotion, saucer, sponge, and prescription with me and to bathe her eyes three or four times a day with warm water which had been boiled and cooled down. In a fortnight her conjunctiva was in a normal condition. I corrected her error of refraction and told her to come to see me if she had any further trouble. I saw her again last year; she had had no further trouble with her eyes.

CASE 2.—A man, aged 55 years, consulted me in February, 1903. His eyes had been inflamed off and on for two years, the attacks lasting for periods varying from one to seven months; he had used a solution of cocaine given him by an oculist and repeated from time to time by him and others for weeks at a time. The lower lids were red and velvety, especially near the outer canthi, and there were large vessels on the surface of the eyeball. I advised him to use nothing but warm water boiled and cooled and also ordered glasses for reading. On March 9th he was quite well. On Sept. 5th, 1905, he came with severe conjunctivitis of the left eye, caused he thought by a foreign body, which quickly got well by the use of boric acid lotion.

CASE 3.—A man, aged 43 years, consulted me in November last year; his eyes were suffused and irritable. They had been bad off and on for two years. He suffered from chronic nasal catarrh, which I thought was at the bottom of the eye troubles. He showed me two prescriptions given him by an oculist; both contained solution of adrenalin,

1 in 2000, and he had used one or the other three or four times a day for months at a time. His vision was ⅔ with very doubtful hypertrophic astigmatism, for which he had been ordered glasses. My prescription was, omit the drops and use warm water. His eyes were much better in a fortnight and the last time I saw him, about three weeks ago, he told me he had had no further trouble.

CASE 4.—A medical man, a personal friend of my own, consulted me for catarrhal conjunctivitis. I told him to use boric lotion and he got a good deal better in the course of three weeks but did not get quite well. I told him to go on with the boric lotion and that he might, when he wished his eyes to look extra well, put a drop of adrenalin solution, 1 in 2000, into them, but only occasionally. I saw him at long intervals, but his eyes did not get well; indeed, they sometimes seemed to be worse in spite, as I supposed, of treatment. I could not make it out, but one day elicited the fact that he hated looking as if he had been drunk over night and that he found adrenalin so very useful that he always carried a bottle about with him and rarely went into a patient's house without dropping some into his eyes. I told him to knock it off altogether and use warm water. He quickly recovered.—I am, Sirs, yours faithfully,

CHARLES HIGGENS, F.R.C.S. Eng.,
Senior Consulting Ophthalmic Surgeon, Guy's Hospital.
May 26th, 1906.

THREE CASES OF SUDDEN DEATH.

To the Editors of THE LANCET.

SIRS,—The following three cases which happened recently present several points of interest. I made the post-mortem examination in each case and the specimens from the first two have been preserved.

The first patient was a man, aged 51 years, who had complained occasionally of pain referred to the epigastric and interscapular regions; he came under the care of Mr. John Gardiner and was treated for dyspepsia. On Oct. 24th, 1905, the pain was more acute and on the 25th at about midday it became suddenly severe with dyspnœa and the patient died before medical aid could be summoned. On the thorax being opened the pericardial cavity was found tense and distended; it contained about 15 ounces of clear serum. This being removed a thick layer of blood-clot was discovered round the origins of the large vessels and on removing this the source of the hæmorrhage was found to be a rent in the origin of the aorta which admitted the forefinger. Further examination showed that the internal and middle coats of the aorta had been ruptured and that a dissecting aneurysm had formed with the adventitia of the aorta as its sac, this finally rupturing into the pericardial cavity.

The second patient was a man, aged 62 years, who had been for a short time under the care of Dr. R. H. Clay, complaining of giddiness and other cerebral symptoms. His heart had been carefully examined and pronounced to be sound. On April 10th, 1906, he was suddenly seized with faintness and soon expired. At the necropsy the heart was found to be of normal size, but its walls were thin, flabby, and fatty. The left ventricle especially was filled with tough adherent whitish clot—probably ante-mortem—which extended up to the aortic semilunar valves. The mitral valves were rigid with atheroma, though apparently competent. The aorta was covered with atheromatous patches and after transverse section remained stiff and incollapsible. The semilunar valves and coronary arteries were likewise in an advanced state of atheromatous degeneration.

The third patient, who was a man, aged 41 years, on April 27th, 1906, being late for a train which he wished to catch, ran hard a distance of 30 yards downhill to the station. He then dashed across the line and up to the train, after which he stumbled and fell against the train and then on to the platform, expiring almost immediately. In this case there had been complaints for some weeks previously of epigastric pain, thought to be due to dyspepsia and of dyspnœa on walking uphill, so that he would stop sometimes "to get his breath." The heart had been carefully examined by three or four medical men and nothing abnormal was detected. At the necropsy it was found to be rather above the average size and its walls thick and flabby. On cutting open the left ventricle a patch of fibroid degeneration was found to run through the muscle and patches of atheroma in an early stage were found in the aorta. The cranial sinuses and cerebral veins were engorged with blood, but nothing else abnormal was discovered.

I am, Sirs, yours faithfully,
Plymouth, May 25th, 1906. HENRY W. WEBBER, M.D. Lond.

ANTERIOR OR POSTERIOR GASTRO-JEJUNOSTOMY.

To the Editors of THE LANCET.

SIRS,—Although this correspondence has already been long drawn out may I ask you to allow me once more briefly to answer some of the criticisms in the letter from Mr. B. G. A. Moynihan which appeared in THE LANCET of May 12th, p. 1345?

First, as regards Dr. J. G. Mumford's case. Whether or not the disaster would have occurred in the absence of the abnormality found must be a matter of speculation. It appears to me that if a portion of jejunum close to its origin be fixed to a dilated stomach subsequent contraction of the stomach will be apt to tear the anastomosis, whether the duodenum ends on the right or on the left of the spine. Be that as it may, the important point is that had there been the play afforded by a loop between the duodenum and the stomach the disaster would not have occurred. Mr. Moynihan takes exception to the opinion I have expressed as to the mechanics of the no-loop operation. Surely it must be mechanically incorrect to suture a portion of fixed intestine to a moveable viscus without the play afforded by a loop. When we consider that in these cases the stomach is often greatly dilated, and that after gastro-jejunostomy the stomach contracts, often to a very considerable extent, the incorrectness of the mechanics is still more apparent. Mr. Moynihan further states that "there is not a scrap of evidence to show that under normal conditions the posterior no-loop operation is ever mechanically incorrect; on the contrary, all the evidence that exists shows that it alone among all methods is the one which is free from mechanical complications and which, being completed, leaves the viscera in almost their normal relations." This conclusion is a little premature. Since Mr. Moynihan wrote his letter Mr. E. Ward[1] has stated that the worst of his cases of circulus vitiosus was after a posterior operation with no loop. Dr. W. J. Mayo has recently[2] recorded two cases in which chronic regurgitation of bile occurred after the no-loop operation, due to angulation at the site of the anastomosis. Dr. Mayo points out a defect in the no-loop operation as hitherto performed in that to secure isoperistalsis the jejunum is partially twisted at the site of anastomosis. I think that these cases justify my original contention that the no-loop method has not been tried for a sufficiently long period to justify dogmatic statements as to its freedom from complications.

Next, as to internal strangulation. Mr. Moynihan states that on all the occasions on which he has subsequently had the opportunity of seeing the anastomosis the aperture has been securely closed. This evidence is valid so far as it goes, but what does it prove? Only that so far internal hernia has not occurred in any of the cases in which the jejunum has been stitched to the mesocolon, not that it is, as Mr. Moynihan asserts, impossible. As I remarked in my lectures, possibly suturing the jejunum to the mesocolon may prevent internal hernia, but we must not overlook the possibility of the adhesions becoming stretched. Even in the days before any attempt was made to close the aperture in the mesocolon internal hernia was not a frequent occurrence; therefore, I submit that it is a modest demand to ask that before asserting that stitching the jejunum to the mesocolon renders the occurrence of an internal hernia an impossibility we should have a more extensive experience of the efficacy of this procedure than is the case at the present time. To sum up, the evidence as to the possibility of internal strangulation after the no-loop operation is incomplete. As regards the operation with a loop, the evidence, as I have already indicated, is in favour of the anterior operation. As regards peptic jejunal ulcer, the discussion as to whether it has been more common after the anterior than after the posterior operation is perhaps of academic rather than of practical interest, for I believe that when the importance of a large anastomotic opening is more fully realised this complication will occur less frequently.

[1] THE LANCET, May 12th, p. 1345.
[2] Annals of Surgery, April, 1906.

Still, it is important to remember that when it does occur it is more serious after the posterior than after the anterior operation.

In my last letter I said: "If the loop of a gastro-jejunostomy can become waterlogged apart from mechanical obstruction, how is it that the loops of which the small intestine is composed do not become waterlogged?" Mr. Moynihan objects to this comparison and suggests as a more suitable analogy the conditions which exist when a loop of intestine otherwise healthy is fixed by an adhesion or by a diverticulum. I accept this analogy; it supports my argument. Surely when waterlogging occurs in such cases it is secondary to mechanical obstruction. As Mr. Moynihan says, "kinking may occur." Precisely, that is my contention; the waterlogging in these cases and after a gastro-jejunostomy is secondary to the mechanical obstruction produced by a kink. There is, I submit, no evidence that fixation of a piece of intestine produces waterlogging apart from mechanical obstruction. Anchoring the sigmoid for volvulus does not lead to waterlogging and at operations and at post-mortem examinations it is not rare to find the intestines matted together and adherent to a degree which would lead us to suppose that obstruction must have resulted, and yet nothing of the kind has occurred.

Mr. Moynihan now states that he does not consider water-logging to be the primary factor, but in his former letter he said: "The proximal jejunal limb becomes waterlogged and obstructs, it may be, both afferent and efferent openings." If this statement does not imply a belief that the water-logging is the primary condition I am at a loss to know what it does mean. Mr. Moynihan next says: "That the obstruction is due to the loop is shown by the fact that in the absence of a loop it does not occur although the method of anastomosis remains the same." In view of the cases recorded by Dr. Mayo and Mr. Ward this statement must be regarded not as a fact but as an untenable hypothesis. Mr. Moynihan asks, "How is it that a loop becomes waterlogged which is free to empty itself through an unobstructed afferent opening, and that when vent is given to a waterlogged loop by entero-anastomosis the obstructive vomiting in almost every case is at once relieved although no change is made at either afferent or efferent opening?" I think that the explanation is quite simple. Although the afferent opening is patent the efferent opening is obstructed, consequently the gastric contents cannot escape except by the act of vomiting. The intra-gastric pressure is thus raised and this rise of pressure interferes with the ready entrance into the stomach of the contents of the loop, therefore the loop becomes waterlogged. After entero-anastomosis is performed the loop is drained by the new opening and the stomach contents can readily escape through the *afferent* opening into the proximal limb and thence through the entero-anastomotic opening into the efferent jejunal limb.

May I correct one misapprehension with regard to my own work. In my lectures I recorded one case (not two) in which regurgitant vomiting was due to gastro-jejunostomy. We all of us must learn in the school of experience, and I believe that in this case regurgitant vomiting was due to neglect of a detail in technique of which at that time I did not realise the importance. I did not, nor do I, maintain that the no-loop method is difficult, although I have no doubt that in Mr. Moynihan's practised hands it appears easier than it really is. My point is this. In performing a posterior no-loop operation it is necessary to draw the stomach out of the wound so as to expose its posterior surface and also to tear a hole in the mesocolon. In the anterior operation there is less manipulation as the anastomosis is performed with the stomach practically undisturbed and no hole is made in the mesocolon. Therefore, I say, the anterior operation is simpler and less complicated. My attitude towards the posterior operation is one of "philosophic doubt," although I have a settled conviction that the anterior operation as now performed gives excellent results. As yet, however, we are in the early days of successful gastric surgery and our present views and present practice may subsequently require considerable modification. I do think, therefore, that we should be very careful not to draw premature conclusions as to the superiority of a particular method. In my judgment the no-loop method has not been on trial for a sufficient length of time to justify the conclusion that it is preferable to the anterior.

Finally, I must thank Mr. Moynihan for his kind and appreciative words. I need hardly say that although in this friendly controversy I have on some points differed from him, such difference does not in any degree diminish my regard for his work and my high appreciation of the part he has played in furthering the progress of gastric surgery.

I am, Sirs, yours faithfully,

HERBERT J. PATERSON.

Upper Wimpole-street, W., May 23rd, 1906.

THE TREATMENT OF INFANTILE DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—I have found the following to be the most satisfactory method of treatment for the summer diarrhœas of infants. Firstly, administer a purge consisting of castor-oil, rhubarb, calomel, or saline. In my experience the last two are the most efficacious, one-tenth of a grain of calomel being administered every half hour for at least four doses and sometimes until the motions assume a bilious hue. The saline is given in this manner: dissolve two teaspoonfuls of sulphate of magnesium in a teacupful of warm water, flavour with a little lemon, and then give two teaspoonfuls of this mixture every 20 minutes until the bowels are well cleared. Where the motion is of a dysenteric character the colon must be flushed out with some weak antiseptic solution.

So far as medicinal medication is concerned I have had the most brilliant results with copper arsenite given in doses of $\frac{1}{10\,0\,0}$ grain to $\frac{1}{1\,0\,0}$ grain every ten minutes for from four to six doses and then every two hours. A most useful method for removing the horrid fœtor of these cases is to give the sulphocarbolates of zinc, soda, and lime, of each ½ grain; if given in combination with bismuth the bismuth will no longer blacken the motions, but the sulphocarbolates must be of the purest description or they will produce vomiting and other undesired effects. I find the subgallate or salicylate of bismuth acts better than the subcarbonate or subnitrate.

The other drugs which I most frequently use are cotoine, emetine, and hydrastine. In extreme algid cases I find the most useful aids in a good hot bath and a hypodermic injection of atropine sulphate $\frac{1}{2\,0}$ grain to $\frac{1}{1\,0}$ grain, or glonoin $\frac{1}{2\,0}$ grain. Atropine sulphate has been recommended for the extreme thirst in doses of $\frac{1}{3\,0\,0}$ grain to $\frac{1}{1\,5\,0\,0}$ grain every half-hour. Opium I never use but give codeine sulphate $\frac{1}{2}$ grain to $\frac{1}{12}$ grain or Gregory's salt $\frac{1}{4}$ grain to effect. I have always thought that the better way of judging the dosage of narcotics for children was not so much the age as the weight and *status præsens* of the individual case. The best pain relievers I have found to be hyoscyamine $\frac{1}{10\,0\,0}$ grain, and strychnine arsenate $\frac{1}{1\,5\,0}$ grain, every ten minutes to effect. The diet should be albumin water, oatmeal water, or plain ordinary water, flavoured with lemon; if possible all milk should be stopped for at least 48 hours. The beef-teas and extracts are of use as the easiest way of making broths without any grease. The high fever of these cases is best treated by small doses of aconitine or good hot baths.—I am, Sirs, yours faithfully,

WILLIAM AYRES, B.A., M.D. Dub.

Brierley Hill, Staffs., May 28th, 1906.

OFFICIAL STANDARDS OF PURITY FOR JAMS.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the annotation upon the above subject in THE LANCET of March 3rd, p. 613, and the letter by Mr. Morris Streimer commenting on the same in the following week's issue. My attention is particularly called to the statement of Mr. Streimer that "In America glucose is an everyday article on the breakfast table and tea-table." This is very far from being a statement of the actual conditions attending the consumption of glucose in this country. It is true that by the term "glucose" in America is meant the thick, white syrupy liquor produced by the hydrolysis of starch with an acid, usually hydrochloric or sulphuric, and consisting essentially of a mixture of dextrin and dextrose and a small quantity of maltose. That group of bodies known as dextrin is one of the principal constituents of glucose. This substance is used in this country largely in the manufacture of table syrups and imitations of honey. In most of the States it cannot be sold without a notification upon the label of its presence. This rule also applies to all importations of foods from foreign countries made wholly or in part of glucose.

Glucose table syrups are not by any means the only syrups used upon our breakfast-tables. We have in this country immense quantities of syrups made directly from the evaporated juice of the sugar cane and sorghum and these are in much more common use than glucose table syrups, especially in the country districts. We have also large quantities of table syrups made from the evaporated juice of the maple tree. I am not quite certain that glucose made by the action of an acid at a high temperature and under pressure on starch is as good a food as the hydrolytic products of starch made under the influence of the enzymes of the digestive tract. I think it is a general observation that natural products are more wholesome than those of an artificial character which resemble them chemically. For this reason I am of the opinion that sugars produced by the natural diastasic action of the digestive fluids on starch are perhaps more wholesome and more digestible than those produced from the same substances by hydrolysis with acids. I am not, however, ready to say that glucose, even when made with acids, is not a wholesome food product. This is a matter which perhaps is to be determined in the future.

I especially wish to approve of the editorial note respecting the adulterations with glucose. I am of the opinion that a substance which in itself might not be unwholesome may become so if used for adulteration. For instance, starch cannot be regarded as an unwholesome substance, and yet if used as an adulterant so as to unbalance the ration and make it more starchy than it should be otherwise it may produce serious results by deranging the digestion. For the same reason glucose, which of itself may not be regarded as an unwholesome substance but consisting, as it does, largely of dextrin and dextrose and containing very little maltose, may become so if added to a product which consists naturally chiefly of maltose.

The use of glucose in jams, jellies, and marmalades is not necessary to prevent crystallisation of cane sugar, because if the fruits be used in sufficient quantities and the heating be sufficiently long continued there will be produced enough invert sugar to prevent crystallisation. My own observation of the use of glucose for adulteration purposes in this country leads me to believe that its particular value lies in cheapening the products and not in making them more presentable, more palatable, or more wholesome. The substitution of apple juice derived, as it is, chiefly from the cores and skins, which are the residue of the evaporated apple industry, can never make a product as wholesome nor as palatable as a natural one. It is certainly cheaper and if not unwholesome might be offered under some proper name for consumption by those whose small incomes do not permit them to purchase the better and higher-priced articles. I therefore approve most cordially of the statements contained in your editorial comment on Mr. Streimer's letter.

I am, Sirs, yours faithfully,

H. W. WILEY, M.D.,
Chief of the Bureau of Chemistry of the United States Department of Agriculture.

Washington, D.C., May 9th, 1906

THE EFFERVESCING BEVERAGE.

To the Editors of THE LANCET.

SIRS,—The very interesting annotation which appeared on this subject in THE LANCET of May 26th, p. 1482, had the uncommon demerit of being too judicial in tone. For the counts in the indictment against the use of aerated drinks are more numerous and more grave than a casual reader of the article would be led to believe. Setting aside the undoubted responsibility of mineral waters for the deplorable increase in the consumption of whisky upon which you rightly lay stress, the mere ingestion of these waters, as such, is an undesirable practice from many points of view.

One of the most prominent evils of the day is over-alimentation, and there can be no doubt that the local stimulating effect upon the gastric mucosa produced by the presence of CO_2 fosters this evil in a very definite degree. Over alimentation creates a demand for an increased supply of oxygen, the necessity for which is still further augmented by the absorption of the CO_2. The practice therefore entails a considerable and wholly unnecessary strain upon the cardio-vascular apparatus, with results which are none the less grave because they are not immediately manifest.

The people who are, as a rule, most addicted to the use or abuse of these waters are large eaters, and large eaters have almost invariably some degree of gastric dilatation. The effect of introducing CO_2 or indeed any other gas into the stomachs of such people is necessarily that of still further increasing the dilatation and by ballooning the organ of displacing the heart and thus adding materially to the cardio-vascular embarrassment.

Carbon dioxide is not only a poison but it is physiologically an excrementitious gas which the body is at much pains to excrete, and it is difficult indeed to find a single reasonable argument in favour of employing such a substance as an article of daily consumption. If it should be necessary, as in the case of ordinary healthy persons it should not be, to stimulate the gastric mucosa, surely this end can be achieved by some means less objectionable and less conducive to cardio-vascular distress than the ingestion of these waters. I am, Sirs, yours faithfully,

London, W., May 29th, 1906. LEONARD WILLIAMS.

TESTS OF DOMESTIC GRATES: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Will you allow me to express the regret of the Coal Smoke Abatement Society that an error occurred in the report of Grate Tests published in THE LANCET of May 19th. Two grates were entered for competition by the Coalbrookdale Company—the "Bostel" patent fireplace, a description of which appears on p. 1414 of THE LANCET, and a second grate of which no description was supplied. Inadvertently the figures given under the description of the "Bostel" grate are those which referred to the second grate. The figures of the "Bostel" grate should be: Coal consumption, 21·73 pounds; temperature, 6·4°; smoke, 1·32, as given under the heading "Coalbrookdale Co." "C" grate on p. 1415. These figures make no difference in the result of the test, as in all calculations the correct figures were employed. I am, Sirs, yours faithfully,

LAWRENCE CHUBB, Secretary.

Victoria-street, Westminster, S.W.,
May 24th, 1906.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University.

THE Ingleby lectures, which have just been delivered, were established for the promotion of obstetric medicine and surgery and in memory of Dr. John Tomlinson Ingleby who settled in Birmingham in 1816 and devoted himself to the interest of the subjects with which his name is now especially associated. The lecturer elected for the present year was Dr. C. E. Purslow, the obstetric officer to the Queen's Hospital, and he chose as his subject the Management of a Case of Labour. Few men have had more experience than Dr. Purslow of the work of which he spoke and in his lectures he gave a clear exposition not only of his own personal experiences but also a summary of the work and opinions of others. The lectures were attended by a large audience and it is to be hoped that they will be published, for they contain many suggestions of value both to practitioners and students.—The Guild of Undergraduates had a garden party at Highbury last week. Mr. Chamberlain's orchid houses were open; the weather, which has been so uncertain of late, was propitious and the meeting was most enjoyable.—Unfortunately the Principal is not well again; an attack of influenza has in part undone the good effects of his holiday in southern Europe and he has had to give up some of his engagements but now that more genial weather has come his recovery will no doubt be rapid.

The late Mr. Thomas Corbett.

Mr. Thomas Corbett, M.R.C.S. Eng., L.S.A., whose death was recently announced and whose charities have been chronicled in your columns, was a governor of the University of Birmingham and his death is much regretted. He took an interest in the general work of the University and more especially in its library, to which he was a generous donor. It appears from his will that he has left a fortune of the gross value of £388,729, of which the net personalty was £48,314. By his will he distributes to charitable institutions £95,000 and of this £24,000

are devoted to institutions in the Birmingham district. The Birmingham General Hospital, the Queen's Hospital, and the Worcester Orphan Asylum are to receive £3000 each; the Worcester Infirmary and the Wolverhampton Orphan Asylum £2000 each; the Midland Home for Incurables £1000; and £10,000 are set aside to provide 20 pensions for the blind poor of Worcestershire. The residue of the estate is left in the hands of trustees to be utilised for charitable purposes and schemes and as the sum is very large the responsibilities of the trustees are great, but money is wanted for so many excellent purposes that their only difficulty will be in deciding how the residual estate may be used to the best advantage.

Overcrowding in Towns.

I am glad to see that this important subject was discussed at a meeting of the Surveyors' Institution which was held in Birmingham the other day. We know what an important effect overcrowding has, not only on the morals but also on the health of any district and we know further that much of the overcrowding is due to the fact that it is not possible to erect houses under the present regulations regarding materials and street formation at a price which will allow a fair return on the investment. It is interesting and important, therefore, to note that some surveyors are of the opinion that existing regulations are too stringent. They think more particularly that those dealing with materials of construction and those concerned with road formation might well be relaxed, if the minimum size and height of rooms, the proportion of window to floor space, and proper sanitary conditions were insisted upon. They think also that if their suggestions were carried out overcrowding in towns would probably be soon relieved by the erection of suitable houses in the suburbs, such erection being in many cases retarded or stopped by the cast-iron rules at present in force.

May 29th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Lord Mayor and the David Lewis Northern Hospital.

THE Lord Mayor of Liverpool attended Divine service at St. Luke's Church, in state, on May 27th, when a sermon was preached by the Archdeacon of Liverpool on behalf of the funds of the Northern Hospital. The Lord Mayor was accompanied by the Lady Mayoress, members of the city council, and members of the committee and medical staff of the hospital. The Archdeacon made a powerful appeal on behalf of the charity. The collection realised £120 11*s.* 6*d.*

West Derby Union and its Institutions: Inspector's Satisfactory Report.

Mr. Jenner-Fust, Local Government Board inspector for the North-Western District, was present at the meeting of the West Derby board of guardians on May 16th and at the close of the ordinary business he said that he had every cause to congratulate the guardians upon the condition of its various institutions. No union had carried further than they had the system of classification by placing various classes of paupers in different institutions. In that they had been, he thought, in advance of public opinion but public opinion was now certainly moving in that direction. Such reforms, however, could not be carried out by large unions singly and he was sure that the West Derby union, which was almost, if not quite, the largest in the kingdom, must have found an advantage in combining with its neighbours. Personally he would be glad to see in its large cities the municipal area and the Poor-law area made the same. He did not mean that the management of the Poor-law should be handed over to the city council, but that a board of guardians should be elected for the city instead of several boards representing different parts of the city. Such an arrangement, he considered, would tend to efficiency and economy, and there was reason to think that events might be moving in that direction. With regard to the question of vagrancy he did not think that the guardians would be pleased at the new wards at Belmont-road being handed over to the administration of the police. He failed to see how much uniformity was to be obtained if the management was to be placed in the hands of the police authorities instead of being left to the numerous boards of guardians. If guardians combined they would be able to deal with vagrants in quite as satisfactory a manner as the police could do. Now that Fazakerley had come within the area of the city he hoped it might be possible to arrange for a more modern system of drainage at the cottage homes than had hitherto obtained there.

West Kirby Convalescent Home: New Quarters for Nurses.

An important addition to the West Kirby convalescent home for children, in the shape of a nurses' home, was opened on May 26th. Hitherto part of the convalescent home has been set apart as sleeping-rooms for the nursing staff, so that the erection of the new quarters confers a double advantage on the institution inasmuch as it not only affords the nurses a comfortable and admirably appointed home but it sets free a considerable portion of the convalescent home and thus will in future enable a larger number of children to be admitted to the beneficial treatment which the establishment affords. Standing at the rear of the convalescent home, with which it communicates by a box bridge connecting the second storeys, the new building, erected in three storeys, comprises 19 bedrooms and three well-furnished sitting-rooms, one on each floor. Altogether the building has cost £2600. It had been arranged that in conjunction with the inaugural ceremony the Lord Mayor of Liverpool should pay the convalescent home the visit of inspection which is customarily arranged for the chief magistrate during his year of office. Unfortunately, slight indisposition prevented his lordship from fulfilling the engagement but the Lady Mayoress was good enough to act as his representative, and the Mayoress of Birkenhead was also present. The opening ceremony was gracefully performed by Miss Royden, the daughter of Sir Thomas Royden, Bart.

A Year's Health at St. Helens.

Dr. J. J. Buchan, the medical officer of health of St. Helens, has issued his annual report on the health of the borough for 1905. The birth-rate was 36·05 per 1000, which is again one of the highest recorded in the great towns. The death-rate was 17·21 per 1000—the lowest on record—and the infantile mortality rate was 132 per 1000 births, which is also the lowest on record. The prevalence of infectious disease was low, that of typhoid fever being the lowest in the records of the town. All these results are most satisfactory, the remarkable reduction in the death-rate with the low infantile mortality rate and the maintenance of a high birth-rate being specially gratifying.

Opening of the New Baths at Wavertree.

The Lord Mayor, on May 28th, opened the new baths at Wavertree which have been erected at a cost of £25,000 and take rank among the finest in the kingdom. The swimming bath for men is 75 feet by 35 feet and has a capacity for 74,000 gallons of water. Dressing accommodation is provided for 100 bathers. The section for women consists of a swimming bath 50 feet by 27 feet, with a capacity of 37,000 gallons, and dressing accommodation for between 45 and 60 bathers. Slipper baths, shower and spray baths, and a vapour bath, all for males, are also provided. The building is fitted throughout with electric light.

May 29th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Glamorgan and South Wales Water Bill.

THE Glamorgan county council has only partially succeeded in its endeavour to provide a better water-supply for those portions of its district which are at present only indifferently supplied. In the Glamorgan and South Wales Water Bill, which was read a second time in the House of Commons on May 28th, the county council sought powers to create water districts and water boards somewhat on the lines of the hospital districts which may be formed under the Isolation Hospitals Act, 1893, and powers were also desired enabling the county council to go into neighbouring counties to obtain water-supplies for the county of Glamorgan. The committee of the House of Lords which in the first instance considered the Bill disallowed the clauses giving these powers but permitted the retention of those giving the council power to expend in any one financial year a sum not exceeding £1000 in making inquiries as to existing supplies within the county and as to possible sources of supply in the other South Wales counties and to cause

surveys and estimates to be made for the purpose of ascertaining the best means and the probable cost of utilising such sources of supply. The making of these surveys does not confer upon the countycouncil any preferential right to the water on the lands surveyed and the consent of the owner or occupier of the land will have to be obtained prior to the making of the survey.

University of Wales.

The court of governors of the University of Wales has approved the draft charter for the establishment of a faculty of medicine. Candidates for degrees in medicine or surgery will be required to have an arts or science degree. The course of study will be for five years.

Lectures to Midwives.

The Swansea corporation has arranged for a course of lectures to be given to midwives at the Swansea General Hospital.

Notification of Cases of Puerperal Fever.

The Midwives Act appears to be administered in the county of Hereford by the clerk to the county council with the assistance of a nurse whose salary is paid partly by the council and partly by a nursing association. There is no county medical officer of health and the assistance of the medical officers of health in the various districts of the county has not been sought. Some difficulty having been found in ascertaining the existence of cases of puerperal fever which were being attended by registered midwives the county council has undertaken to pay a fee of 2*s.* 6*d.* to every medical practitioner who notifies a case of this disease occurring among his patients.

Bridgend Workhouse.

During the past ten years the overcrowded condition of the Bridgend workhouse has been commented on by the Poor-law inspectors of the Local Government and the steps which have from time to time been taken by the board of guardians to effect a remedy have been only partially successful. The master of the workhouse in a recent report has again drawn attention to the need for increasing the accommodation. On one occasion lately there were 47 more inmates than there was room for and on another day 103 men had to manage as best they could in a day-room intended for 27.

Difficulties under the Infectious Diseases (Notification) Act.

At a meeting of the St. Austell (Cornwall) rural district council held on May 25th the medical officer of health reported that 23 cases of scarlet fever had recently occurred and added that in one parish a medical practitioner had sent a number of notifications of the disease, all bearing the same date. When he visited the cases he found that some of the patients had been suffering from scarlet fever for two or three weeks and consequently it was extremely difficult to take any precautions to prevent contagion. The council decided to write to the medical man in question and to inform him that it was the duty of medical practitioners to notify cases as early as possible.

May 29th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Royal Infirmary.

LAST week I referred to the feeling that had been aroused by the action of the managers of the Edinburgh Royal Infirmary in connexion with an irregularity which had taken place in the residency. I have now to report that the managers have removed the notice which was posted at the infirmary gate, and that four out of the five ex-residents having sent an apology for being in the residency after hours have had their sentence of banishment from the infirmary withdrawn. The fifth ex-resident, as mentioned last week, has gone to India. This is regarded as the closing of an unfortunate incident.

Fish-curing Stations.

The Local Government Board has had under consideration the question of the housing accommodation of workers engaged in the herring-curing industry at Scottish fishing stations and the Secretary for Scotland has requested the local authority to instruct the medical officer of health and sanitary inspector to make a special inspection, when the fishing season is at its height, of the huts and other accommodation (if any) provided at the port or ports within the jurisdiction of the local authority where fishing is carried on. The Board desires to be furnished with a joint report on such accommodation at each port. The report is also to contain information regarding the sanitary condition of the fish-curing workshops.

Rumoured Retirement of Professor McKendrick.

Many old students of the University of Glasgow will regret to learn that Dr. J. G. McKendrick, professor of physiology in the University, intends to retire at the close of the present session. Professor McKendrick's connexion with the chair of physiology dates back to 1876 and he is now one of the senior professors at Gilmorehill. The lucidity of his lectures and his unvarying kindness have achieved for him great popularity with many generations of students. His successor, who will be nominated by the Crown, will be fortunate in having the control of the magnificent new laboratories which are at present being erected for the teaching of physiology and the carrying on of research work in that subject.

Penny Crèche in Glasgow.

Day nurseries have for a long time been carried on with much success in various parts of the city but 3*d.* per day for each child is more than some of the poorer class of working women can afford to pay. For the benefit of the babies of these women it has been decided to open a crèche at which only 1*d.* a day will be charged. The institution is to be carried on as economically as possible, but the small sum charged cannot, of course, be expected to cover the expenses which must be met by voluntary contributions. The ages of the children admitted to the crèche vary from one week to five years and they must either have no mother or their mother must be employed at work outside. The weekly wage coming into the house must in all cases be under £1. Another scheme which is under consideration in connexion with the crèche is the providing dinners at the rate of ½*d.* for the older children of poor parents. It is premature as yet to speak of the probable success of the institution but if it manages to get hold of that class of children for whose wants it is intended to minister and if the range of the scheme be still further extended without interfering with the independence of the parents, it is possible that it may give some assistance in reducing the high infantile mortality rate in the city.

Glasgow Ophthalmic Institution.

From the report of this institution which has just been issued it appears that the increase of popularity that marked its transference to the Royal Infirmary 15 years ago still continues. The number of patients in the wards is more than double the number in 1892, while the first attendances have increased from 2714 in 1892 to 9969 in 1905, and the total attendances from 7442 in 1893 to 54,086 last year. The number of operations during the year was 803 and in addition many minor operations were performed in the out patient department of the hospital. In the electrical department 42 patients were treated by the x rays, &c., and in 24 cases of penetrating wounds the x rays were utilised to determine whether or not a foreign body was lodged in the interior of the eyeball. The ordinary revenue amounted to £1834 2*s.* and the expenditure to £2442 10*s.*, being an excess over revenue of £608 8*s.*, this excess being met by drawing on the extraordinary revenue.

Casualty Surgeons' Dinner in Glasgow.

The first annual dinner of the Glasgow casualty surgeons was held last week, Chief Constable Stevenson presiding.

May 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Recent Action against Dr. James Byrne Coleman.

A CIRCULAR letter dated May 25th has been addressed to many of the medical profession of Dublin, signed by the President of the Royal College of Physicians of Ireland and the President of the Royal College of Surgeons in Ireland, requesting their attendance at a meeting to be held at the College of Physicians on June 6th, when a proposition will be submitted congratulating Dr. James Byrne Coleman on the

successful manner in which he has recently refuted the unfounded charges brought against him and expressing sympathy with him in the trouble through which he has passed "without blemish on his character or honour." A copy of the foregoing proposition, when passed, will be sent to all the members of the medical profession in Ireland for their approval and the names of those approving will be publicly presented with the document to Dr. Coleman.

Apothecaries' Hall of Ireland.

At a special meeting of the court of directors of the Apothecaries' Hall of Ireland held on May 18th the governor, Colonel F. G. Adye-Curran, A.M.S. (retired), was requested to ask the Irish Members at Westminster to oppose the suggested inclusion of Ireland in the Pharmacy Bill as it would result practically in the free sale of poisons in this country to the danger of the community.

St. John Ambulance Association: Dublin Branch.

A magnificent silver cup, to be known as the "Dublin Challenge Cup," has been presented by Lord Iveagh to the Dublin branch of the St. John Ambulance Association for annual competition. The competition, which will take place in Dublin in August next, will be confined to holders of the St. John Ambulance "first aid" certificate and will be of a practical kind, including squad and stretcher drill, &c.

The Public Health Appointment in Belfast.

At the weekly meeting of the public health committee of the city of Belfast held on May 24th a deputation, consisting of Dr. W. Calwell (President of the Ulster Medical Society), Dr. Thomas Houston (Secretary of the Ulster Medical Society), Professor J. A. Lindsay, Professor J. W. Byers, Dr. Alexander Dempsey, J.P., Dr. J. S. Morrow, and Dr. W. L. Storey, attended with regard to the office of medical superintendent officer of health of the city of Belfast which is now vacant owing to the resignation of Dr. Henry Whitaker. Dr. Calwell having read the resolutions which had been passed unanimously by the Ulster Medical Society on May 17th (see THE LANCET, May 26th, p. 1504), Professor Lindsay and Professor Byers spoke in support of them, urging that the person to be appointed as the new medical officer of health of a great city like Belfast should be one who has had a thorough practical training and experience in public health, that he should be suitably paid, and that, in any rearrangement of duties, he should be the sole head of the public health department. An interchange of opinions afterwards took place and the deputation retired. On June 1st, at the monthly meeting of the city corporation, a large deputation from the Ulster Medical Society is again to appear.

County Down Asylum.

During the year 1905 there were under care in this asylum 467 males and 396 females, making a total of 863. The average cost of maintenance of each patient for one year, calculated on the gross expenditure, less repayment of loans, was £23 16*s.* 5*d.* The net average cost, deducting repayment of loans, receipts from paying patients, and other miscellaneous receipts from the gross expenditure, was £22 2*s.* 4*d.*, against £23 13*s.* 5*d.* in the previous financial year, a reduction of 11*s.* 1*d.* per head. The substitution of cocoa for tea at supper effected a direct saving of £150 a year. The working of the farm during the last financial year shows a net profit of no less than £1017 12*s.* 5*d.*

The Cork Board of Guardians and the Visiting Physicians of the Workhouse.

At a recent meeting of the Cork board of guardians the master of the workhouse reported that, finding Professor W. E. A. Cummins, one of the visiting physicians, was about to hold a post-mortem examination on an inmate who had died in the institution, he had forbidden the necropsy. An inquest was afterwards held and by direction of the coroner the post-mortem examination was made. The patient referred to was admitted in a comatose condition to the workhouse, having been recently discharged from the Artillery, and his relatives thought that he might have received an injury whilst in the service and consequently gave permission for the holding of the necropsy which was vetoed by the master of the workhouse. Professor Cummins had procured the assistance of Dr. A. E. Moore, lecturer in pathology at the Queen's College, free of expense to the guardians, but by the master's action the economy was frustrated. At the necropsy it was discovered that the cause of death was tuberculous meningitis. As showing how completely the Cork guardians misunderstood the situation, one of them remarked that "if Professor Cummins did not know what was wrong with the patient he should not have waited till after death to call in a specialist," while the final result of their deliberations was a resolution directing the medical officers of the workhouse in future to call in as consultant a dispensary medical officer and to pay the fees for the consultation. The four visiting physicians have sent in a joint letter requesting the withdrawal of the insulting resolution but the guardians have not found the courtesy to take action in the matter.

May 29th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

New Regulations as to the Destruction of Rats on Board Ship.

THREE years ago the destruction of rats on board ships coming from countries infected with, or suspected of, plague was made obligatory in France. A new regulation was published on May 13th which repeals the former one and lays down that henceforward the destruction of rats (*dératisation*) is obligatory for the admission into French ports of ships coming under the following headings: (1) every ship the port of departure of which is considered as infected with plague or which has called at such a port; and (2) every ship or vessel on to which has been transhipped more than 50 tons of merchandise which has come directly from a country considered as infected with plague. These regulations are applicable to ships which have already discharged part of their cargo in one or more than one foreign port. Destruction of rats may be dispensed with in the following cases: ships which only land passengers in French ports without coming alongside of a quay and which only remain a few hours in the port; ships only making a call of less than 12 hours and which are discharging less than 500 tons of cargo, provided the discharging of such cargo shall be carried on exclusively by day and the ship shall not come alongside of a wharf and its moorings are rendered unpassable to rats; steamers which have not touched at any port considered as infected with plague for 60 days since their departure from the last infected port and on board of which no illness of a suspicious nature has occurred; ships which having made a call at a port considered as infected can certify that they have not come alongside of any quay, neither have taken any cargo on board; and ships which have already undergone *dératisation* in a foreign port since their departure from the last port considered as infected with plague. Such ships must also certify that no suspicious case has occurred on board of them during the passage and that the destruction of the rats has been carried out with the same apparatus and the same guarantees as in France. The captain of such ship must hand over to the sanitary authority a certificate mentioning the apparatus employed, the conditions under which the destruction was carried out, and the results thereof, and this certificate must be viséd by the French Consular authority. Ships which come under the conditions laid down in paragraph 2 above mentioned. If the cargo taken on board has been transhipped from a vessel which has already been *dératisé* under the conditions laid down in paragraph 1 and if a certificate of previous *dératisation* is supplied (coal taken on board for the purposes of the voyage without the ship having come alongside of a wharf is not considered cargo). Destruction of rats can be carried out on the voyage in any French ship which carries a medical officer and is provided with apparatus the efficaciousness of which has been recognised by the Superior Council of French Public Hygiene. The sanitary authority of the port of arrival has the duty of considering the certificates handed over, the conditions under which the destruction of the rats has been carried out, and any other papers bearing on the question. The authority can demand that the process of *dératisation* be done over again, either in part or in whole. The same regulations are applicable to foreign bottoms and under the double condition that on the one part the medical sanitary officers on board such ships shall have the same qualifications as the French sanitary medical officers and that on the other hand the apparatus used shall be of the pattern above described. In every port destruction of rats must be carried out before the discharge of the cargo. The operation of rat destroying shall include

rats in the holds, bunkers, and store rooms, in the quarters of the crew, and in the quarters allotted to emigrants or to passengers of the third and fourth class, and in general to the whole interior of the ship. Officers' cabins and cabins allotted to passengers of the first and second class as well as the saloons need not be submitted to a process of *dératisation* except in so far as the sanitary authorities shall decide it to be necessary, notably when the ship is suspected of, or definitely infected with, plague or when the rats on board have been found to be dying from definite plague or there has been some unwonted mortality among them. Destruction of rats must be carried out exclusively by the aid of the apparatus the efficaciousness of which has been recognised by the Superior Council of Public Health in France. It is to be carried out in ports which are supplied with this apparatus, such apparatus being only for the use of ships coming from countries considered as infected with plague. It must be carried out under the conditions agreed upon by the sanitary authority and under the permanent control of such authority. As before, a certificate detailing the conditions under which the destruction of rats has been carried out shall be delivered to the captain or owners by the sanitary authorities.

The Relation of the Health of the Army to the Dwelling of the Soldier.

At a meeting of the Academy of Medicine held on May 15th M. Lemoine and M. Simonin communicated a paper embodying the result of an inquiry undertaken by them into the conditions of 134 barracks containing 95,000 men. The inquiry showed that the way in which barracks were constructed had but a secondary effect upon the health of the troops. The crowding together of soldiers for military purposes is the chief cause of the spread of contagious and epidemic diseases in the army and, moreover, as the barracks are generally placed in the middle of towns the sanitary condition of the town in its turn exercises a marked influence upon the health of the soldiers quartered therein. The attack-rate of the eruptive fevers and of diphtheria is smaller in old barracks than in new ones, for the former only contain from 400 to 500 men while the latter hold from 900 to 1000. The same diseases show a frequency in direct ratio to the size of the garrison town, whatever be the nature of the barracks. The condition of any barrack does not seem to have any direct relation to the amount of typhoid fever, but the prevalence of the disease is in direct relation to the condition of the water-supply of the town. Pulmonary tuberculosis is more common in old barracks than in new but this is probably due to the fact that the older barracks are in the larger towns where military duties are more exacting than in small towns. It may be said, then, that the conclusion of M. Lemoine and M. Simonin is correct—namely, that the military authorities should set themselves to obviate crowding together of the barrack rooms and should endeavour to build only small barracks to contain a small number of men. But in addition the sanitary condition of the garrison towns should be most carefully attended to.

"*Thyroid Migraine.*"

At a meeting of the Hospitals Medical Society held on May 11th M. L. Levi and M. H. de Rothschild communicated a paper dealing with a thyroid form of migraine. The paper was based upon seven cases of migraine which had been cured by thyroid treatment. The authors founded their argument upon the success which had followed the administration of thyroid substance, upon the signs of thyroid deficiency which they had observed in patients who suffered from migraine, upon the auto-therapeutic action of pregnancy, upon the influence exerted in women by the appearance of the menses, and by the menstrual crises concerning the appearance of the migraine and its disappearance—i.e., at the menopause. Thyroid migraine presents the same symptoms as ordinary migraine. It may appear late or early in life, may be hereditary or acquired, unilateral or bilateral. It may last for a few hours or even for days but it is always paroxysmal. Headache and vomiting accompany it and necessitate rest in bed. Thyroid treatment may be useful also in those forms of migraine due to other causes.

Dislocation of the Carpus.[1]

At a meeting of the Surgical Society held on May 16th M. Delbet read a paper upon Dislocation of the Carpus. In his opinion this lesion is not so very rare. It may occur with or without fracture of the bones and is caused by a fall on the palm of the hand. In the first degree there is fracture of the scaphoid by tearing, the fracture being at the level of the neck of this bone. In the second degree there is a real dislocation, the os magnum passing behind the semilunar which swings (*bascule*) around the radio-semilunar ligament. Sometimes the scaphoid and the cuneiform (*pyramidalis*) are fractured, the upper fragments following the os magnum. The hand is rendered absolutely useless and the pain is acute. The appearance of the displacement recalls that in a fracture of the lower end of the radius but is situated lower down. Reduction is often difficult and it is frequently necessary to incise the wrist between the palmaris longus and the flexors. As many fragments of bone as are necessary are removed and the reduction is then easy.

May 28th.

[1] An interesting case of dislocation of the wrist with fracture of the scaphoid appears at p. 1532 of this issue.—ED. L.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Inauguration of the Policlinico.

OF the series of congresses held in Rome recently, one of the most interesting was that which celebrated the inauguration of the Policlinico. Although the building of this institution was begun over 20 years ago its completion has from various causes been delayed, so that only in August of last year could its wards be thrown open for the reception of patients. Indeed, only quite recently have these wards been made available for the purpose which they were especially intended to subserve—namely, that of clinical observation and instruction combined with laboratory research. The credit of originating the idea of the Policlinico belongs chiefly, if not wholly, to Professor Guido Baccelli, but for whose exertions during his tenure of office as Minister of Public Instruction the already protracted period occupied in its building would have been still further prolonged. The occasion of its inauguration was therefore seized upon as a suitable one for making a public recognition of Professor Baccelli's services, not only by his own countrymen but by representative medical brethren and other scientific men from abroad, who accordingly came in great force to do honour to the Italian clinician and by whom he was fêted and toasted to a degree which must have proved embarrassing to anyone less used to such demonstrations than is that genial and eloquent veteran. Amongst the distinguished strangers present at the festivities was the British representative, Dr. Donald MacAlister of Cambridge, President of the General Medical Council, who, conspicuous in his brilliant academical robes, made an excellent impression at the final banquet by addressing the assembly in fluent Italian. The inauguration ceremony at the Capitol was honoured by the presence of the King. The gathering was in every respect an unqualified success and was greatly enjoyed by all who participated in it.

Sanitary Congress.

The National Sanitary Congress promoted by the "Parliamentary Medical Bond" ("Fascio Medico Parlamentare") held its first sitting at Rome on March 26th in the Argentina Theatre. As explained in a former letter this Parliamentary Medical Bond consists of nearly all the medical members of the Italian Chamber of Deputies, united irrespectively of political parties for the purpose of promoting in Parliament the passage of hygienic measures and of defending the interests of those carrying on hygienic work of all kinds throughout the country. The leading spirit in this movement is Professor Sanarelli (well known for his researches on yellow fever), on whose initiative the Congress was called together and by whom this meeting of it was chiefly organised. A novel feature of this association of sanitarians is that not only the medical profession but veterinarians, pharmacists, sanitary inspectors, all, in short, who are professionally interested in hygienic work of any kind are eligible as members. Those who took part in the Congress, although they numbered nearly 3000, formed therefore only a small proportion of the many who, had their duties and circumstances permitted, would have been present. It will thus be easily understood that the new movement is one of considerable importance and that its potential influence for the ends which it has in view is unusually great, since

the members are persons in constant and intimate contact with all classes of the population and are able, especially in rural districts, to exercise much authority in local questions. United and organised as they will henceforth be, they may well become powerful instruments in furthering the interests of sanitation and thus contributing in a most effectual way to the public welfare. The causes which have operated in bringing about this union are chiefly two. One of these is to be found in the unsatisfactory economic condition of the sanitarian classes in general, a condition mainly due to the excessive number of sanitarian recruits of all kinds who are yearly poured forth from the portals of the too numerous colleges and universities of Italy to swell the ranks of its already unduly large sanitarian army. The supply thus enormously exceeds the demand and in consequence they have become, as it were, a drug on the market. But the principal reason lies in the grievances of the long-suffering and over-burdened "medico condotto" who is expected by an ignorant and tyrannical local authority to give years of arduous study, the highest scientific knowledge and skill obtainable, and the best years of his life to its service, and all for a miserable pittance of from £60 to £100 per annum, which, moreover, is not properly secured for him and which may be withheld from him unexpectedly and arbitrarily on some trivial or groundless pretext. To remedy these and other grievances by legislative action the "Fascio Medico Parlamentare" has been constituted, the object of the Congress lately held being to strengthen its hands by indicating clearly and authoritatively the disabilities of the sanitarian classes and the direction in which their Parliamentary representatives should work in order to relieve them from a burden which has become intolerable. In his spirited inaugural address Professor Baccelli recalled the high estimation in which medical men were held in ancient Rome as evidenced by the letters of Cicero and the distinctions and favours showered upon the profession by many of the emperors. Cæsar conferred the Roman citizenship on all the Greek physicians who came to Rome and his example in showing special favour to the profession was followed by Augustus, Nero, Vespasian, Hadrian, Antoninus, and Commodus, all of whom encouraged the practice of medicine by heaping public honours, privileges, and riches upon the most distinguished sons of Æsculapius in each of their respective reigns. Professor Sanarelli in a lucid and an eloquent speech upheld the just demands of the profession for better treatment by the State and appealed for united action amongst its members in order to secure the necessary reforms not only for selfish reasons but in the interest of the public at large whose welfare is so closely bound up with an efficient sanitary service. The Congress having elected a presiding committee, with Professor Durante at its head, next proceeded to the business of the meeting, dealing with such subjects as pensions for the "medici condotti," the regulation of the new sanitary law (of 1904), the reform of the procedure for the election of the superior council and of the provincial councils, the minimum salary for the "medici condotti," the admission into hospitals of well-to-do patients, the possession of degrees in medicine and surgery by dentists, the reform of the Institute of Medico-legal Experts, reduced railway fares for sanitary officers, and the question of foreign practice in Italy. In regard to the last-mentioned subject a noteworthy motion was proposed by Dr. Santini and approved by the Congress, to the effect that the free exercise of their profession in Italy be granted to those foreign practitioners whose countries of origin allow a similar privilege to Italian medical men. The remarkable change of sentiment here displayed on this vexed question is undoubtedly the result of the wise liberality shown by the English Privy Council in admitting Italians to the British Medical Register.

May 19th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

A Case of Leukæmic Priapism.

AT a recent meeting of the Clinical Society Dr. Victor Blum showed a man, 20 years of age, who was suffering from a very rare complaint. In the middle of the night, six days before being seen in the hospital, he awoke with a rather painful erection of the penis which had continued ever since. No trace of mechanical injury could be detected on examination and a history of sexual infection was absolutely and persistently denied. The length of the penis was 21 centimetres (eight and a half inches). It was hard like bone but the erection depended only on the corpora cavernosa, for the glans was soft and allowed the rounded end of the corpora cavernosa to be readily felt. The urethra was also soft and not swollen. There was no ejaculation or spermatorrhœa. Examination of the nervous system showed absolutely normal conditions but as the man was very pale a blood count was made, with the result that 565,000 leucocytes and 3,225,000 erythrocytes were found per cubic millimetre, the ratio of the two kinds of cells being therefore 1 to 5. The spleen was enormously enlarged, being 28 centimetres (11 inches) long and 24 centimetres (nine and a half inches) broad. The connexion between the two abnormal co-existing conditions was pretty clear, so that they no doubt were in the relation of cause and effect. There are 70 such cases on record, in which priapism was caused by an abnormal condition of the blood. One post-mortem examination has been made and revealed thrombosis of the blood cavities in the corpora cavernosa. Excessive pain very often accompanied the condition. The other possible explanation—namely, pressure upon the erector nerves of the penis or the prostatic plexus by enlarged glands—would cause distension of the corpus cavernosum and glans as well. The treatment in this case could be directed only against the leukæmia. X ray treatment of the penis and the spleen had effected a cure in a case reported by Goebel and it was proposed to try it in this case as well. If septicæmia should develop it would be necessary to open the corpora cavernosa in the hope of saving the patient's life.

Heavy Damages awarded for X Ray Burns.

An action which has been before the courts for a long time was decided recently and the details are of much interest for medical practitioners. Professor Lang and Dr. Holzknecht were sued by a patient on the ground that they had submitted him to a course of x ray treatment with the result that severe burns developed on his back. He had sought relief for a very obstinate form of psoriasis over almost all his body and after various remedies had been tried in vain the x ray treatment was suggested by Professor Lang and applied by Dr. Holzknecht who is the chief of the x ray department of the State hospital here and is an authority on radio-therapeutics. The patient suffered severely and was laid up for many weeks owing to the burns. He estimated his loss at £200 and, moreover, claimed upwards of £4000 damages for pain and trouble. The case was heard several times and many experts were called on both sides. It was admitted that at the time of the first application of the treatment—namely, in 1902—the method was not exactly recognised as a safe way of dealing with psoriasis. The judge awarded the plaintiff 30,000 kronen (about £1200) damages and 5000 kronen (about £200) for personal expenditure, which is a record. The court came to the conclusion that the defendants had neglected to explain to the patient the risk of a method of treatment which was at that time to be regarded as in the experimental stage, and that only Dr. Holzknecht was responsible as he was the expert on radio-therapeutics, whilst Professor Lang, the dermatologist, who had merely suggested the method, could not very well foresee its effect. It may be added, that since this unfortunate experience the electrotherapeutists have been actively seeking for a trustworthy way of estimating the intensity of the x rays and that Dr. Holzknecht himself has been fortunate enough to invent the radiometer, an apparatus consisting of a series of chemical compounds which are coloured by x rays according to the amount of electric energy in operation. The unit is called one "H," and the usual dosage is three "H," which is independent of the duration or the intensity of the application but denotes solely the amount of energy received at any single sitting.

Organisation of Medical Practitioners.

The passive resistance which has now been in force for three months has had not much influence on the local authorities, although several municipalities, prompted by the season and by the influx of visitors in search of health, have found it advisable to increase the remuneration for vaccination to one krone (10*d*.) per case. A general strike of the country district officers of health is therefore in contemplation and a strike fund of 100,000 kronen is required. To collect this sum and to prevent any "strike breaking" an organisation of all practitioners has been proposed and a preliminary meeting of the representatives of all medical

clubs and corporations was held recently with the object of forming a union comprising the whole profession in Austria. The result of the meeting was satisfactory, as all representatives were authorised by their respective corporations to coöperate in order to bring about the desired effect. About 40,000 kronen have been already subscribed and collections are being made throughout the capital and the provinces. As a further means of insuring the effectiveness of the strike, in case it should prove necessary, the practitioners in certain German-speaking parts of the neighbouring countries—namely, Germany and Hungary—have promised not to accept any post in Austria so long as the strike exists. The firmness of the front presented by the medical men may be understood from the fact that with respect to the racial and national differences of opinion, which are in ordinary times so pronounced in the heterogeneous population of the Austrian empire, a truce has by common consent been established in medical circles.

A Case of Carcinoma of one of the Segments of a Double Uterus.

Professor Ehrendorfer not along ago showed a case of carcinoma in a double uterus and has now published an account of it. The patient, who was a virgin, 50 years of age, complained of profuse bleeding from the vagina long after the menopause. Whilst curettage was being performed it was noticed that the vagina was very narrow; the examination of the curetted mucosa showed a few fragments resembling those of a neoplasm and a thorough examination proved the existence of a carcinoma on the side of the vagina where the neoplasm had replaced the normal tissue over a patch of a centimetre in diameter. The curette had quite accidentally brought out the few fragments. During the operation it was found that the vagina was double, the vagina which was curetted being nearly normal, whilst the other one was much narrower and had a small, hardly visible opening below the orifice of the urethra. A double uterus was also found and the one belonging to the concealed vagina was converted into a hard, ulcerating mass but the disease had not yet touched the other uterus. After total abdominal hysterectomy the patient recovered completely and up to the present time, 13 months after the operation, there has not been any reappearance of new growth. Cases of this kind are extremely rare. When the uterus and vagina are both of them double the two vaginæ are almost invariably well developed and the true nature of the malformation was not at first recognised on account of the absence of visible signs of two vaginæ.

May 28th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Appointment of Health Officer for Calcutta.

AFTER several contradictory resolutions passed during the last five months at protracted and adjourned meetings the corporation of Calcutta has finally decided to give to Mr. J. Nield Cook 18 months' further tenure of office. The corporation has further determined to advertise at an early date for a new health officer. This is one of the few appointments of any value in India which are open to men who are not in the Indian Medical Service. It must not be supposed that the office is a bed of roses. Anyone who knows Calcutta recognises how much might be done but although the city has vastly improved in many directions it can hardly be said that the work and the organisation of the health department have advanced to the same degree. Bombay, like Calcutta, has an officer not in the Government service, but Madras and Rangoon have health officers appointed by the Government. The other sanitary appointments in India are of such small value that they are either held by Indians or by civil surgeons along with their other duties.

The Plague Epidemic and its Unusual Course.

The plague epidemic throughout India is this season following an unusual course. Whilst it has been comparatively mild and has developed later in nearly all parts, the city of Bombay is suffering to an intense degree and about a thousand deaths a week are being recorded. Calcutta, on the other hand, has this year escaped with a very modified outbreak. There has not yet been any official announcement with regard to the results of the work of the scientific investigations on plague but it is rumoured that the rat-flea theory has been accepted. Authorities in many places have come to recognise the influence of the rat in the spread of the disease and great efforts have been made in many towns to exterminate these pests. Scores of thousands of rats have been destroyed in Rangoon, Calcutta, and Bombay, but anything approaching extermination has not been realised. The milder outbreaks this year can hardly be attributed to this measure, because the lessened severity has been equally marked in places where the rats have been left undisturbed. For the whole of India 15,633 deaths were reported last week. Bombay returned 2106 deaths, Madras 14, Bengal 2240, United Provinces 2589, Punjab 8162, Burma 149, Central Provinces 73, and Kashmir 208. It is interesting to note that the recrudescence in Bombay city is a month later in the season than heretofore and has developed to its present intensity in the hottest part of the year. No more ought to be heard of the annual decline being brought about through the advent of the hot weather.

May 12th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

A Medical Member of the Legislature.

IT is reported that Dr. William E. Collins, one of the leading practitioners in Wellington, is about to be called to the Upper House. Very general satisfaction is expressed at this latest creation of the Seddon Government. Dr. Collins is a graduate of the University of London and was a student of St. George's Hospital. He has for many years taken an active interest in all that pertains to the welfare of the profession generally. For the last three years he has been president of the Medical Council.

The International Exhibition at Christchurch.

Great efforts are being made by the health department to arrange for a good exhibit of sanitary appliances at the forthcoming International Exhibition which will be opened at Christchurch on Nov. 1st, 1906. Applications have been made to all the States of the Australian Commonwealth and to most of the manufacturers of sanitary ware in Great Britain to send samples of their products. The department is prepared to pay carriage on approved exhibits. Applications should be made to the High Commissioner for New Zealand, 13, Victoria-street, London, S.W., or to the chief health officer, Wellington, New Zealand. As most of the sanitary fittings used in this colony come either from Great Britain or America makers of such articles will have an excellent opportunity of showing their wares. The exhibition will remain open for at least six months.

Vaccination.

The French authorities in Tahiti have entered into a contract with the health department here for a regular supply of calf lymph. The Government has now in full working order an excellent up-to-date laboratory for the manufacture of lymph. The latest returns show that vaccination, despite all the inducements offered by the authorities, is becoming less and less practised. Only 8·5 per cent. of the children under one year of age were vaccinated last year. This is due in a large measure to the long-continued security of the colony from invasions of smallpox. This falling off is greatly to be regretted.

Medical Registration.

At last some amendment of the Medical Registration Act has been effected. Though the reforms are not great, still the alterations will do something to check the constant influx of imperfectly educated medical men.

The Sale of Poisons.

The pharmacy board is again agitating for an alteration in the Poisons Act which certainly needs bringing up to date. The board suggests, among other things, that the administration of the Act should be placed in its hands and that the schedule of official poisons should be enlarged.

Cattle Disease.

There has been an increase in the number of cases of blackleg in the Taranaki district. The agricultural department is now manufacturing its own vaccine for this disease

and thousands of calves are being inoculated weekly. These inoculations will have to be continued for some time until the grazing grounds become quite free from the spores of the organisms.

Registration of Plumbers.

A Bill for the registration of plumbers is proposed. At present the various technical schools issue certificates which are only recognised in their several districts. The intention is to have a colonial register so that a certificated plumber may ply his trade all over the colony. This is very much to be desired. As things are at present, a man removing from one large city to another has to pass an examination at each place before he can work.

General Medical News.

A discussion on gastro-enterostomy was opened by Dr. Thomas Cahill and Mr. David P. James at the last meeting of the Wellington branch of the Medical Association. There was a record attendance.—The chief health officer of the colony, Dr. James M. Mason, who has been on a visit to Europe, has returned to the colony much improved in health.—The Minister of Public Health, who also holds the portfolio of Postmaster-General, has left in order to represent the colony at the Postal Conference now being held in Rome.—The maternity homes established last year by the Government are being largely used not only by patients but by nurses qualifying for the certificate in midwifery.—The Government has bought several large areas of land close to the principal centres whereon to erect workmen's dwellings. Easy terms have been arranged whereby workmen may acquire the houses which have been built.—There is a rumour afloat to the effect that in order to check the unfair charges made for fish the Government intends to open fish shops to be controlled by State officials.

Wellington, April 10th.

Obituary.

JOHN HENRY BRYANT, M.D. LOND., F.R.C.P. LOND.,

PHYSICIAN TO, AND LECTURER ON MATERIA MEDICA AND THERAPEUTICS AT, GUY'S HOSPITAL.

THE unexpected death of Dr. John Henry Bryant, coming as it does when the early promise of a great career was beginning to show fulfilment, leaves a gap in the staff of Guy's Hospital which will be difficult to fill and robs London of an able member of its medical world. His many abilities had already won for Dr. Bryant a larger share of consulting work than is usually the lot of young physicians, and his discrimination and powers of diagnosis were becoming fully and widely recognised. His zeal and thoroughness, however, led to his undertaking work beyond even his great capabilities and the result was a failure of health which necessitated a complete rest. Recent news of distinct improvement in his condition made the shock following the announcement of his death all the greater, and the very suddenness of it makes those who knew him well realise with more than usual vividness how great is their loss. He was born on June 4th, 1867, and was the son of the late William Mead Bryant and Mrs. Bryant of Ilminster, Somerset. He was educated at Ilminster Grammar School and at Sherborne School, Dorset, where his name is inscribed in the roll of honour. He entered Guy's Hospital in 1886 where he had a distinguished career as a student, winning among other prizes the treasurer's gold medals in medicine and surgery in 1891. He obtained the degree of M.D. Lond. in 1891, and became M.R.C.S. Eng. and L.R.C.P. Lond. in 1890, M.R.C.P. Lond. in 1895, and F.R.C.P. Lond. in 1901.

As a teacher Bryant's work was of the highest order, systematic thoroughness, combined with a certain personal magnetism which was irresistible, winning him a place as one of the first teachers of his day. As medical registrar he did an immense amount of work, coupled with private coaching, and in everything, then as later, he was unsparing of his own energy and physical powers. His lectures showed the same conscientious zeal, every one being written out before delivery and no point which could help the student being slurred over. This thoroughness, combined with personal charm and firmness, followed him in his career as a physician, inspiring all who came to him with a feeling of confidence in his opinion and diagnosis. It was this, combined with his great abilities, which was creating for him a great future to which his friends were looking forward as to a certainty. He was able, too, with his wide knowledge of the world and commonsense views of life, to take a very human view of his patients and so, in winning their confidence, to show them the reasons for treatment and to help their own curing. Though in later years a man of very quiet demeanour and of few words, he had a large fund of sympathy and tact which won him a wide circle of sincere friends, the more sincere because in him they recognised a man of unflinching straightforwardness, of unfailing honesty, and of broad-minded charity. He was medical registrar at Guy's Hospital from 1892 to 1898, when he was appointed assistant physician. At this time also he became demonstrator of morbid anatomy, an appointment which he held until 1903 when he was appointed lecturer on materia medica and therapeutics. In the practical world of sport he was well known as a fine Rugby half-back, playing for Guy's, Surrey County, and Richmond. He was also no mean sprinter on his day and took a keen interest in the hospital athletic sports, officiating almost invariably as judge. He was, in fact, in the truest sense an all-round sportsman. Broad-minded, generous, straight, the truest of friends, one of the most able of our young physicians, he was a man who, alas, carrying his love of work to excess, has left his friends lamenting a loss to which it will be difficult to become reconciled. He made numerous contributions to medical literature, the principal being his articles on Electro-therapeutics in Hale White's "Therapeutics," on Diseases of the Abdominal Blood-vessels in Allchin's "System of Medicine," papers on Hyperpyrexia, Suppurative Pylephlebitis, on the Production of Gas-containing Cavities in the Viscera, Functional Pulmonary Regurgitation, Acute Intestinal Obstruction caused by the Ileum becoming adherent to a Lithopædion, and Calcification of the Arteries in a Child, aged six months, in the Guy's Hospital Reports, together with various others published in the medical journals. He was also editor of the Guy's Hospital Reports and at the time of his illness was engaged upon a book on Clinical Diagnosis.

Medical News.

UNIVERSITY OF CAMBRIDGE.—Owing to the great increase in the number of students of chemistry and physics it is proposed to build considerable additions to the University chemical laboratory and the Cavendish laboratory.—The grace for the promotion of Dr. Nuttall, F.R.S., to the new readership in hygiene has been adopted by the Senate.—The grace for exempting students in science from the necessity of taking both classical languages in the previous examination has been rejected by a large majority.—The following degrees were conferred on May 24th:—

Sc.D.—W. J. Sell, F.R.S., Christ's.
M.B. and B.C.—S. A. Henry, Trinity.
B.C.—G. L. Webb, Caius.

The Hopkins prize in physics has been awarded to S. S. Hough, F.R.S., St. John's.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates having passed the necessary examinations have been admitted Fellows of the College:—

C. M. Benson, B.Ch., &c., Univ. Dub.; P. J. Byrne, L.R.C.S., &c., Edin.; A. N. Crawford, L.R.C.S.I., &c.; P. L. Crosbie, L.R.C.S.I., &c., Surgeon Royal Navy; W. L. Murphy, L.R.C.S.I., &c.; W. J. Niblock, B.Ch., &c., Royal Univ., Ireland, Captain, I.M.S.; G. Sheppard, L.R.C.S.I., &c.; and R. A. Stoney, B.Ch., &c., Univ. Dub.

The following candidates have passed the primary part of the Fellowship examination:—

A. Greene, B.Ch., Univ. Dub.; R. V. Khedkar, L.R.C.S., &c., Edin.; J. W. Killen, B.Ch., &c., Royal Univ., Ireland; O. St. J. Gogarty, student, Univ. Dub.; J. P. Grainger, student, R.C.P. & S.I.; C. Greer, student, R.C.P. & S.I. (Victoria, Australia); W. E. Hopkins, student, Univ. Dub.; S. W. Hudson, student, R.C.P. & S.I.; H. B. Sherlock, student, R.C.P. & S.I.; C. J. W. Tierney, student, Royal Univ., Ireland; and P. J. Timoney, student, R.C.P. & S.I.

The following candidate having passed the necessary examination has been admitted a Licentiate in Dental Surgery of the College:—

N. Y. Stewart.

The following candidates have passed the primary part of the Dental examination :—

P. M. Black, R. F. Cooper, R. G. Fitchie, H. J. Hedley, S. Miller, T. J. Ollivere, and D. M'C. Smith.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bonn:* Dr. K. Bachem has been recognised as *privat-docent* of Pharmacology.—*Budapest:* Dr. E. Konrád has been appointed *privat-docent* of Psychiatry and Dr. Hudo Preyss has been appointed professor of Bacteriology.—*Copenhagen:* Dr. Claudius has been recognised as *privat-docent* of Surgery.—*Dorpat:* Dr. Zoege von Manteuffel has been appointed to the chair of Surgery in succession to Dr. W. Koch.—*Gratz:* Dr. Otto Gross has been recognised as *privat-docent* of Psychopathology.—*Heidelberg:* Freiherr von Dungern has been appointed to the Institute for the Investigation of Cancer.—*Kiel:* Dr. Schneidemühl has been appointed Extraordinary Professor of Comparative Pathology.—*Lemberg:* Dr. K. Panek has been recognised as *privat-docent* of Hygiene.—*Munich:* Dr. Albert Uffenheimer has been recognised as *privat-docent* of Children's Diseases.—*Prague:* Dr. Pick, professor of dermatology, is about to retire.—*Vienna:* Dr. Friedrich Wechsberg has been recognised as *privat-docent* of Internal Medicine.

IMPROPER CANVASSING.—Mr. J. B. Bawden, M.D. Edin., of Blaenavon, Mon., had his name removed from the Medical Register on May 23rd owing to his holding the office, after complaint had been made, of paid medical officer of the "Blaenavon Tradespeople's Doctor's Fund," an association which systematically practises canvassing for the purpose of procuring patients. On May 25th a meeting was held at Blaenavon to protest against the action of the General Medical Council, and Dr. Bawden, who was present, said that he did not receive any communications from any source warning him against taking the practice until after he had made a binding agreement with the Tradesmen's Doctor's Fund, an agreement which he could not lawfully break. The meeting decided to formulate a petition to the General Medical Council to alter its decision, and failing this to take the question to Parliament.

UNIVERSITY OF OXFORD.—The third annual course on Ophthalmology will be held from July 9th to 21st. The main idea of the course is to demonstrate (on actual patients so far as possible) the whole range of ophthalmology. The first week will be mainly devoted to demonstrating the practical examination of patients, the use of the ophthalmoscope, and the work of refraction. During the second week the work will be more specialised. Altogether some 500 cases will be present for demonstration. The fee for the course is £5 5*s*. Gentlemen attending the course will be provided with board and residence at Keble College at the rate of 7*s*. 6*d*. per day. Further particulars may be obtained from Mr. Robert W. Doyne, Margaret Ogilvie's Reader in Ophthalmology in the University of Oxford, 34, Weymouth-street, London, W. Early application is desirable, as the numbers must be strictly limited. Preference will be given to Oxford graduates. As some ophthalmic surgeons might like to take advantage of the large number of very interesting cases that will be collected for the post-graduate course the most interesting cases will be reserved for the Monday and Tuesday following the course (i.e., July 23rd and 24th) if a sufficient number of surgeons should send in their names; and in this case Mr. Nettleship's lecture on Family Eye Diseases will be reserved for the morning of July 23rd, and communications on this subject will be invited from others. In the afternoon the cases will be present for inspection at the Oxford Eye Hospital. Any surgeons who desire to demonstrate any new operative procedures will have beds placed at their disposal at the Eye Hospital. There will also be arranged a display of instruments and apparatus. Surgeons who desire to attend will be accommodated with board and residence in Keble College at the rate of 7*s*. 6*d*. per day, and can be received on Saturday, July 21st, or Sunday, or early on Monday, the 23rd. Those who may wish to accept this invitation are requested to make application without delay.—In a Convocation held on May 22nd the following appointments were confirmed: James Ritchie, M.A., B.Sc., Fellow of New College, professor of pathology, to serve as examiner in preventive medicine for the 1906, 1907, and 1908 examinations; Henry A. Miers, M.A., D.Sc., Fellow of Magdalen College, Waynflete professor of mineralogy, and Gilbert C. Bourne, M.A., D.Sc., Fellow of New College, lecturer in comparative anatomy, to act as examiners for the Burdett-Coutts scholarship in Michaelmas term, 1906.—The degree of B.Sc. has been conferred on Herbert Henry Thomas, B.A., Balliol College.—The Romanes lecture has been postponed until Michaelmas term owing to the illness of the lecturer.—The Herbert Spencer lecture will be delivered on Thursday, June 7th, by the Hon. Auberon E. W. M. Herbert, D.C.L., St. John's College.

ELIZABETHAN FAIR IN AID OF KING'S COLLEGE HOSPITAL REMOVAL FUND.—On May 23rd, 24th, and 25th there were held in Lincoln's Inn Hall and grounds an Elizabethan fair and fête in aid of the fund for the removal of King's College Hospital to the South of London. The fair was opened on the first day by H.R.H. the Duchess of Connaught, on the second day by the Lord Mayor of London, and on the third day by the United States Ambassador. Among the list of patrons were T.R.H. the Duke and Duchess of Connaught, T.R.H. the Prince and Princess Christian of Schleswig-Holstein, H.R.H. the Princess Alexander of Teck, H.H. Princess Victoria of Schleswig-Holstein, and H.H. Prince Alexander of Teck. It was the hope of the organisers that the fair and fête would be one of the most brilliant social functions of the year. Judging from the throng of visitors and from the brilliant assembly of stall-holders the hopes of the organisers were probably realised. We trust that the proceeds will augment in no small degree the fund in aid of which the fair was held. Very quaint and picturesque were the representations of Old London in Tudor times, "the old cross at Enfield," the "Old Rye House," and "Cheapside." Mr. W. S. Gilbert's admirable travesty "Rosencrantz and Guildenstern" was produced one day and pieces by Mr. H. Swears called "Hero and Heroine" and by Mr. Nigel Playfair entitled "Amelia" were also played. Old English dances, May revels, strolling minstrels, and other attractions were provided, including an excellent "pavement artist" in the person of Mr. W. L. Wyllie, A.R.A.

A MEDICAL MEETING AT JERUSALEM.—On May 1st a dinner followed by a meeting was held in the Grand New Hotel, Jerusalem. The following were present from various parts of the country: Dr. H. Butler, Dr. W. E. Cant, Dr. J. Cropper, Dr. S. Gould, Dr. F. Johnson, Mr. E. W. G. Masterman, Dr. R. Sterling, and Mr. G. R. M. Wright. After dinner microscopic slides were exhibited by Dr. Butler and Dr. Cropper illustrating the bacteriology of ophthalmia and corneal ulcer and certain points in malaria, particularly the multiple infection (by five parasites) of the red cell in tertian malaria, &c. In a subsequent paper Dr. Butler read an abstract of his work showing the relative frequency of the Koch-Weeks bacillus, the pneumococcus, the Morax Axenfeld bacillus, and the gonococcus, the main conclusions to be drawn being the following: (1) In simple trachoma a smear is very often sterile; and (2) in the worst cases of purulent ophthalmia with corneal ulcer a large number (50 per cent.) show the presence of the gonococcus. This was of special interest in view of the comparative rarity of any other manifestations of gonorrhœa in the usual sites and accounted for at least one case of gonorrhœal arthritis in the hand of a nurse which occurred recently. Dr. Cant of the British Ophthalmic Hospital read a short but important paper deprecating the use of caustic solutions of excessive strength in the treatment of eye disease. He had known solutions of 60 grains of silver nitrate to the ounce advocated, the result of such applications being often disastrous. As a routine method solutions of more than 2 per cent. of silver nitrate were to be avoided. Dr. Cropper read a short paper on the present position of his work on Syrian fever, which, he found, could be easily marked off from malaria by a constantly present leucocytosis of 15,000 leucocytes per cubic millimetre, the average in malaria in apyrexia being 7000 or so. The existence of intracorpuscular motile forms was now amply attested and their importance appeared from the fact that of 93 cases in which they were observed 59 were seriously ill, 5 (at least) had died, 19 were noted as cachectic, and 10 were slightly ill; 24 cases were not fully recorded. Mr. Masterman read notes of a most curious case of œlema, he having published the records of three similar cases some time ago under the title of wandering œdema. This elicited some discussion. Mr. Wright gave details of a case of intussusception following appendicectomy in which recovery ensued after the passing of sloughs from the bowel

extending over several weeks. Dr. Sterling related two cases of guinea worm in soldiers from Yemen in Arabia and Mr. Johnson a case in all respects resembling ainhum from Kerak. After a most enjoyable evening and a vote of thanks to Dr. Cant for presiding it was unanimously resolved to hold a similar meeting yearly in Jerusalem.

A DEVONSHIRE CENTENARIAN.—Mrs. Mary Metherell of Tavistock has celebrated the 102nd anniversary of her birth. Mrs. Metherell was born in Mary Tavy, also in Devon, in 1804.

DONATIONS AND BEQUESTS.—Mr. A. C. Fraser, J.P., of Mongewell Park, Wallingford, has expressed his wish to give £1000 for the endowment of a special bed in Wallingford Cottage Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the President, Vice-President, and Council held on May 22nd, the following examiners were elected:—Physiology and histology (Courts A and B): Dr. D. J. Coffey and Mr. E. L. Ledwich.

KING EDWARD VII. SANATORIUM.—The King Edward VII. Sanatorium, situated near Midhurst, which is the outcome of the gift of £200,000 placed at the disposal of the King by Sir Ernest Cassel, is now for all practical purposes complete and the choice of the actual date of opening is, we understand, under consideration. It is believed that the date selected will be in either the second or third week in June. The site chosen for the building, which was acquired from Lord Egmont, is at Lord's Common, Easebourne, six miles south of Haslemere and three from Midhurst. It is about 150 acres in extent and the foundation-stone of the sanatorium was laid by the King on Nov. 3rd, 1903. The sanatorium is, it may be recalled, not intended to be a wholly charitable institution. Accommodation is provided for 100 patients, 50 of each sex, who will be chosen from among those of slender means who are unable to meet the expenses of prolonged residence in private sanatoriums. The cost of treatment for these patients will be from one to two guineas per week. Accommodation will also be provided for some 12 patients of the well-to-do classes who will be admitted on payment of from eight to ten guineas per week. The average duration of treatment is expected to be about four months and only cases in the early stage of tuberculosis will be admitted.

KASHMIR MISSION HOSPITAL.—The Kashmir Mission Hospital has now been in existence for 40 years and from 1865 to the present time it has been doing excellent work. A feature of recent years has been the quiet but steady growth of the in-patients' department and the readiness of the upper classes of the people, even women, to remain in the hospital for treatment. There have been as many as 45 female patients in the wards at one time, many of them of a class which formerly held aloof from the English mission. To make suitable arrangement for those who can afford to pay some small private wards have recently been built on a new site given for the purpose by the Maharajah of Kashmir. During the year 1905 the number of out-patients was 19,212, the surgical in-patients numbered 1252, and the medical in-patients 171. A pamphlet recently published by the mission giving an account of the Kashmir Hospital Mission and its work contains some excellent reproductions from photographs of the hospital, its staff, and its patients. Mr. Arthur Neve and Dr. E. F. Neve are the medical officers in charge of the mission and are to be congratulated on their labours. Subscriptions to the mission may be sent directly to the Medical Missionaries in India, to Mr. J. H. Baxter, 20, Compton-terrace, Islington, N., or to the honorary treasurer, Miss Neve, 40, Canning-road, Croydon.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Tenure of Office of Public Health Officers.

Sir FRANCIS POWER has introduced a Bill to amend the law relating to the qualification and tenure of office of medical officers of health and inspectors. As the session is now so far advanced there is no prospect of making any progress with the measure this year.

Juvenile Smoking.

The Juvenile Smoking Bill which is passing through the House of Lords will be considered by a Special Committee after the Whitsuntide holiday.

HOUSE OF COMMONS.

WEDNESDAY, MAY 23RD.

A Smoke Nuisance.

Mr. GEORGE HARDY asked the Secretary of State for War whether he was aware that nuisance was caused throughout an extensive and thickly populated district of London by the volumes of smoke poured out of the chimneys of Woolwich Arsenal notwithstanding protests from the Woolwich borough council and the London County Council; that whilst at other works throughout the county manufacturers had been compelled to adopt preventive measures, no effective measures had been adopted at the Royal Arsenal; that the recent Inter-departmental Committee on Physical Deterioration urged the importance of strictly enforcing the law against smoke nuisance, but that local authorities were seriously hampered in suppressing smoke nuisance owing to the exemption of Government works from statutory regulation; and whether he would give instructions for the adoption at Woolwich Arsenal of effective means for permanently minimising the nuisance from smoke.—Mr. HALDANE replied: The matter is one which has received, and is receiving, constant and careful attention and mechanical and other means for prevention are being tried. Improvement has been made of late and efforts will be continued to effect still further improvement.

Fees of Public Vaccinators.

Mr. JOHN JOHNSON asked the President of the Local Government Board whether he had power of himself to reduce the fees paid to public vaccinators without having to appeal to Parliament or any other authority; and, if so, whether he would arrange for such reduction.—Mr. BURNS said: The Local Government Board is empowered in its own discretion to make rules and regulations with respect to the remuneration of public vaccinators. I am giving consideration to the regulations on this subject.

THURSDAY, MAY 24TH.

What is Brandy?

Mr. T. M. HEALY asked the Chancellor of the Exchequer whether foreign spirit made from beetroot and materials other than the grape and Hamburg potato spirit were admitted to entry in this country as brandy; whether this constituted a false trade description under the Merchandise Marks Act; did the Customs authorities refuse to enforce the provisions of that Act as regards brandy; could he explain why rum from other than the sugar cane must be described at import as imitation rum; and was he aware that the courts had recently decided that brandy must be the distillate of the grape, and that this decision had been accepted by the wine and spirit trade.—Mr. ASQUITH answered: It is not the case that spirits made from beetroot and materials other than the grape and Hamburg potato spirit are admitted to entry in this country as brandy. If such spirits were described as brandy on the Customs' entry such description would be a false trade description under the Merchandise Marks Acts. The Customs' authorities do not refuse to enforce the provisions of those Acts as regards brandy. Rum is spirit produced from the sugar cane and, therefore, spirit purporting to be rum but produced from any other material than the sugar cane must be described at import as imitation rum. I understand that several cases bearing on the question—What is brandy?—have been decided in the metropolitan police courts, but I do not know of any decision of the High Court upon the point. I am not aware that there has been any general acceptance by the wine and spirit trades of the decisions of the police magistrates.

Vaccination in the Army.

Mr. T. F. RICHARDS asked the Secretary of State for War whether he would quote the statute empowering him to impose the vaccinal test on conscientious objectors seeking enlistment in the Army or applying for employment in the Arsenal.—Mr. HALDANE replied: A man seeking enlistment in the Army or applying for employment in the Arsenal is asked whether he is willing to be vaccinated or revaccinated; if he declines he is not enlisted or taken on. No statutory authority is required for such a condition.

Inspection of Meat in Paddington.

Mr. MONEY asked the President of the Local Government Board whether his attention had been drawn to the fact that the Paddington borough council had abruptly terminated an arrangement whereby the retail meat traders of Paddington had the protection of the daily inspection of their meat purchases before the same were exposed for sale, so that they were now open to the risk of criminal prosecution, confiscation, and fine, notwithstanding the fact that they had taken all precautions in their power to purchase sound meat; and whether he proposed to take any action in the matter.—Mr FIELD asked the same Minister whether his attention had been called to a circular letter under date of March 31st, 1906, issued by the Paddington local authority to all meat purveyors in its district, notifying the withdrawal of the protection, which prior to the date of the letter had been accorded meat traders, whereby the latter on submitting carcasses of pork for inspection prior to exposure thereof for sale were immune from the institution of criminal proceedings should any carcass so submitted be found affected with tuberculosis; and whether he would make representations to the Paddington borough council for the continuation of the system of inspection.—Mr. BURNS answered: Perhaps I may be allowed to answer these two questions together. I have made inquiry and am informed that the public health committee of the borough council has felt itself obliged to abandon the arrangement referred to by the honourable Members and to give instructions for the inspection of meat to be carried out strictly in accordance with Section 47 of the Public Health (London) Act, 1891. The arrangement was a tentative one and I am informed that the results have been disappointing. I think the practice which has been followed by the borough council had advantages, but it was optional with it to determine whether it would continue it and I have no authority to require it to do so.

FRIDAY, MAY 25TH.

Death-rate in Belfast.

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Local Government Board's attention had been called to the correspondence that had taken place over the high death-rate of Belfast; whether houses had been built upon insanitary sites without let or hindrance; and, if so, who was responsible; and whether he would consider the advisability of ordering an inquiry into the matter.—Mr. BRYCE answered: The correspondence on this subject in the local press has come under the notice of the Local Government Board, but no local representations have yet been received by the Board asking for its interference in the matter. The general suitability of building sites is a matter for the decision of the corporation. The Local Government Board has no functions except in cases in which sites are acquired by the corporation for housing of the working classes; in all such cases a local inquiry is held before a loan is sanctioned. The death-rate from all causes in Belfast is high, but the Board's medical inspector is in communication with the public health committee in reference to the necessity of certain sanitary reforms. An inquiry does not appear to be necessary.

MONDAY, MAY 28TH.

Increase in Cost of Vaccination.

Mr. SOAMES asked the President of the Local Government Board whether his attention had been called to the increase which had taken place in the cost of vaccination since 1898, amounting in some unions to 500 per cent., and whether he could take any steps to reduce it.—Mr. JOHN BURNS, in reply, said: My attention has been called to this matter and I am giving careful consideration to it with a view to seeing whether a reduction in the cost can be effected.

Report of Commissioners in Lunacy.

Mr. WILLIAM REDMOND asked the Secretary of State for the Home Department when the report of the Commissioners in Lunacy would be issued; whether his attention had been directed to the fact that an order was made some years ago that, in consequence of the issue of these reports being delayed until after Parliament had risen they should in future be laid upon the table earlier in the year; and whether such order had been disregarded.—Mr. GLADSTONE replied: I am informed that the report for 1905 will be presented to the Lord Chancellor on or before June 30th in accordance with the provisions of Section 162 of the Lunacy Act, 1890. There is no record of any order to the Commissioners on this subject. A question was asked in 1885 and on that occasion the Commissioners said that they would do all in their power to hasten the preparation of the report.

Public Health Officers Bill.

Sir FRANCIS POWELL brought in a Bill to amend the law relating to the qualification and tenure of office of medical officers of health and inspectors and for other purposes.

The Bill was read a first time.

TUESDAY, MAY 29TH.

Royal Commission on Bovine Tuberculosis.

Mr. FIELD asked the President of the Local Government Board whether the Royal Commission on Bovine Tuberculosis, now making experiments at Stanstead, intended to investigate and report on Dr. Koch's dictum that bovine tuberculosis was not transmissible to the human species, and whether, pending this report, he would cause a modification of the criminal prosecutions now taken against meat traders, especially those who dealt in pork in London.—Mr. JOHN BURNS, in reply, said: Professor Koch's dictum was, as I understand, the main reason for the appointment of the Royal Commission who are investigating the subject and will no doubt report upon it. I have no authority to give effect to the suggestion in the latter part of the question.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

Medical Monograph Series, No. 7. Anæsthetics: A Practical Handbook. By J. Blumfeld, M.D. Cantab., Senior Anæsthetist to St. George's Hospital; Hon. Anæsthetist to St. Mary's Hospital and to the Grosvenor Hospital for Women and Children, London. Second edition. Price 2s. 6d. net.

New Serum-therapy. By D. Montgomerie Paton, L.R.C.S. & L.R.C.P. Ed. Price 6s. net.

IMPRENTA AVISADOR COMERCIAL, Amargura, 30, Habana.

Oftalmologia Clinica. Estadistica de 8000 Enfermos. Tercera Serie. Por el Dr Enrique Lopez. Price not stated.

JACK, T. C. AND E. C., 34, Henrietta-street, London, W.C.

The Edinburgh Stereoscopic Atlas of Anatomy. Section V. (Brain, Head and Neck, and Cranio-cerebral Topography). In five sections, price £1 5s. net, each section.

JOHN L. MURPHY PUBLISHING CO., Trenton, N.J., U.S.A.

Twenty-ninth Annual Report of the Board of Health of the State of New Jersey, 1905, and Annual Report of the Bureau of Vital Statistics. Price not stated.

KARGER, S., Karlstrasse, 15, Berlin.

Die Kontrakturen bei den Erkrankungen der Pyramidenbahn. Von Dr. Otfrid Förster, Privatdozent an der Universität Breslau. Price M.1.60.

Grundriss der Orthopädischen Chirurgie. Für Praktische Ärzte und Studierende. Von Dr. Max David, Spezialarzt für Orthopädische Chirurgie in Berlin. Zweite, wesentlich vermehrte und verbesserte Auflage. Price M.6.

PENTLAND, YOUNG J., Edinburgh and London.

Outlines of Zoology. By J. Arthur Thomson, M.A., Regius Professor of Natural History in the University of Aberdeen. Fourth edition, revised and enlarged. Price not stated.

RUDEVAL, F. R. DE, 4, Rue Antoine Dubois (VIe), Paris.

Les Insectes Buveurs de Sang et Colporteurs de Virus. Par Pierre Mégnin, Membre de l'Académie de Médecine. Price Fr.3.

ST. JOHN AMBULANCE ASSOCIATION, St. John's Gate, Clerkenwell, London, E.C.

Notes on Military Sanitation. By Lt.-Col. H. P. G. Elkington, Royal Army Medical Corps, Sanitary Officer Aldershot Army Corps, Fellow, Royal Sanitary Institute, Fellow, Society of Medical Officers of Health. Price 1s.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.

The Consumptive Working Man. What can Sanatoria do for Him By Noel Dean Bardswell, M.D., M.R.C.P., F.R.S. Edin., Medical Superintendent, King Edward VII. Sanatorium. Price 10s. 6d. net.

STOCK, ELLIOT, 62, Paternoster row, London, E.C.

The Rise and Fall of Reading Abbey. By Jamieson B. Hurry, M.A., M.D., St. John's College, Cambridge. Price 2s. 6d net.

UNIVERSITY OF CHICAGO PRESS, Chicago. (T. FISHER UNWIN, London.)

Methods in Plant Histology. By Charles J. Chamberlain, A.M., Ph.D., Instructor in Botany in the University of Chicago. Second edition. Price 10s 6d. net.

WRIGHT, JOHN, AND CO., Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)

Diabetes Mellitus: its Pathological Chemistry and Treatment: Being Part VII. of Several Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfort-on-Main. Authorised Translation under the Direction of Boardman Reed, M.D. Price 5s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALLEN, L. LLOYD, M.R.C.S., L.R.C.P. Lond., has been appointed Junior Medical Officer in the Lunacy Department, New South Wales, Australia.

ATKINSON-FAIRBANK, J. G., M.B., L.R.C.P., M.R.C.S., L.D.S. Eng., has been appointed Demonstrator to the Royal Dental Hospital of London.

BALL, L. C., L.D.S. Eng., has been appointed Demonstrator to the Royal Dental Hospital of London.

CAMERON, ISABELLA D., M.B., B.S. Edin., has been appointed by the Carnegie Dunfermline Trustees as Assistant to Dr. R. V. C. Ash in connexion with the medical inspection of school children in Dunfermline and also as Lecturer in the College of Hygienic and Physical Training.

CRAIG, R. GORDON, M.B., Ch.M. Syd., has been appointed Honorary Demonstrator of Anatomy in the University of Sydney, Australia.

HAYES, T. CRAWFORD, M.D. Dub., F.R.C.P. Lond., has been appointed Professor Emeritus of King's College and Consulting Physician to King's College Hospital.

MCDOWALL, COLIN F. F., M.B., B.S. Durh., has been appointed Second Assistant Medical Officer to the Newcastle-upon-Tyne City Asylum.

MCKAY, ROBERT, L.R.C.P. Lond., M.R.C.S., L.D.S. Eng., has been appointed Assistant Dental Surgeon to the Royal Dental Hospital of London.

MCMASTER, JOHN, M.B., M.S. Edin., has been appointed Acting Port Health Officer for Port Jackson, New South Wales, Australia.

PATON, E. PERCY, M.D. Lond., F.R.C.S. Eng., has been appointed Examiner in Surgery to the Society of Apothecaries.

RICHARDS, OWEN, M.D. Oxon., F.R.C.S. Eng., has been appointed Surgeon to Kasr-el-Ainy Hospital and Professor of Clinical Surgery in the Egyptian Government School of Medicine.

RITCHIE, A. L., M.B., B.S. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Cavendish District of the county of Suffolk.

SANDES, F. P., M.D. Syd., has been appointed Honorary Demonstrator of Anatomy in the University of Sydney, Australia.

SHORNEY, H. F., M.D., B.S. Me b., has been appointed House Surgeon at the Throat Hospital, Golden-square, W.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident House Physicians, unmarried, for six months. Salary at rate of £25 each per quarter, with board, &c.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £30 per annum, with board, rooms, and attendance. Also Assistant House Surgeon. Salary £50 per annum, with board, rooms, and attendance.

BROMSGROVE, WORCESTERSHIRE, BARNSLEY HALL ASYLUM.—Medical Superintendent. Salary £600 per annum and unfurnished house, with fuel, light, washing, and garden produce.

CANCER HOSPITAL, Fulham-road, London, S.W.—Surgical Registrar. Honorarium £26 5s. per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence. Also Surgeon Dentist.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £50 a year, with board and lodgings.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Surgeon. Also Assistant Surgeon.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge-road, S.W.—Honorary Anæsthetist.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, washing, and attendance.

INDIAN MEDICAL SERVICE.—Examination for not less than Twenty Commissions.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £50 per annum, with board, apartments, and washing.

LITTLEMORE PAUPER LUNATIC ASYLUM, near Oxford.—Second Assistant Medical Officer, unmarried. Salary £120, rising to £150, with rooms and board.

LIVERPOOL STANLEY HOSPITAL.—Assistant Honorary Ophthalmic Surgeon.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrarship.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

NORFOLK AND NORWICH HOSPITAL.—Second Assistant House Surgeon for six months. Honorarium £20, with board, residence, and laundry.

NORTHAMPTON, SAINT ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer, unmarried. Salary £200, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing. Also Pathologist and Bacteriologist. Salary £75 per annum, with lunch.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician. Salary £120, with board and residence.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Anæsthetist. Also Assistant Anæsthetist and Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Medical Officer to the Roentgen Ray Department. Honorarium 25 guineas per annum.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck-street, Cavendish-square.—Honorary Dental Surgeon.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board and residence.

SHEFFIELD UNION HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with apartments, rations, and allowances.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Surgeon to Out-patients.

WEST AFRICA, PRINCESS CHRISTIAN HOSPITAL, Sierra Leone.—Medical Officer. Salary £250, with rooms.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck street, W.—Resident House Physician and Medical Registrar for six months, renewable. Salary at rate of 50 guineas per annum, with board, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry allowance provided.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Sheffield, in the county of York.

Births, Marriages, and Deaths.

BIRTHS.

BEVAN.—On May 25th, at Kensington Gardens-terrace, the wife of Arthur Bevan, M.D., of a daughter.

CROSS.—On May 27th, at Petersfield, Hants, the wife of Robert G. Cross, L.R.C.P., M.R.C.S., of a son.

HALL.—On May 23rd, at Bath Lodge, Bitterne, Hants, the wife of Edmund S. Hall, M.B. Lond., &c., of a daughter.

LAUCHLAN.—On May 26th, at South Side, Clapham Common, S.W., the wife of Charles A. Lauchlan, L.R.C.P. & S.E., of a son.

MYERS-WARD.—On May 30th, at Kelvin House, Green Lane, Northwood, Middlesex, the wife of C. F. Myers-Ward, of a son.

SYMONS.—On May 26th, at Edgefield, S. Peter's, Jersey, the wife of A. N. Symons, M.R.C.S., L.R.C.P., of a son.

WADDELOW.—On May 22nd, 1906, at The Chantry, Whittlesey, the wife of John J. Waddelow, J.P., F.R.C.S. Eng., of a daughter.

DEATH.

JACOB.—On May 28th, at Reigate, Edward Long Jacob, M.R.C.S., M.R.C.P., aged 72 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CHRYSANTHEMUM IN EPILEPSY.

IN THE LANCET of April 29th, 1905, p. 1167, our Manchester correspondent gave an account of a case in which an epileptic patient had derived great benefit from smoking the dried petals of the chrysanthemum mixed with cascarilla bark. The patient had apparently been led to try the petals from a suggestion of Mr. A. W. Martin, medical officer of health of Gorton, who had proposed them as a substitute for tobacco. Mr. Martin now writes to us that since the appearance of the paragraph referred to he has received many communications upon the subject from patients or those interested in them, where relief in epilepsy has been obtained after the use of the petals. One of these, which he incloses, runs as follows:—

> You will remember me writing you about a year ago, about the chrysanthemum smoking. I am very thankful to be able to tell you my son has improved. He has not had a quarter as many attacks and not so severe. He has smoked two cigarettes a day since November and I have dried sufficient for the year; it acts on his bowels splendid. Hoping he will continue to improve and thanking you ever so much, Yours sincerely,
>
> May 14th.

It may be worth while to submit chrysanthemum petals to analysis, which we propose to do when the supply of flowers becomes abundant.

STONE-GROUND FLOUR.

To the Editors of THE LANCET.

SIRS,—A copy of THE LANCET of April 21st was sent me a short time back and under the "Annotations" an article on "Toast" appears. Reference is there made to the grinding of wheat between stones being a matter of history, &c. It occurred to me to write and say so far as my little town is concerned it is not, I am glad to say, altogether so much up to date as the larger ones are and here one can obtain whole meal ground at a watermill about one mile distant, between stones, sold at 1s. 2d. per stone. I send herewith a small loaf, home-made—my wife makes it every week for me—as a specimen of what my food consists of in the bread line. I think you will admit it partakes of all those characteristics mentioned in your article.

I am, Sirs, yours faithfully,

Spilsby, May 18th, 1906. J. JARVIS RAINEY.

ARE DOCTORS GREEDY?

UNDER this amiable title the *Sheffield Telegraph* of May 26th gives a brief account of a paper read by a Mr. J. E. Bradwell before a meeting of the Sheffield United Friendly Societies' Council. Mr. Bradwell is reported to have said that "next to insufficient contributions on account of sickness liability the medical profession was the greatest danger to the future security of friendly societies. Recalling the early arrangement, in accordance with which 2s. per member per annum was deemed sufficient payment by the doctors, he took advantage of rhyme to express himself:—

> 'Those were the days when doctors
> Had kindly sense and reason,
> When soulless greed and avarice
> Were deem'd a sort of treason.'

The doctors, with their cry for more, became very insulting, contemptuous, and negligent of their duties. They had expressed their demands in words which would be somewhat in place in the mouth of a highway robber, holding a pistol to the head of a defenceless traveller, but scarcely what should be expected from a body of cultured, refined, and tender-hearted gentlemen. Friendly societies must learn the lesson of organising for the protection of their own interests." It is such things as those which Mr. Bradwell is reported to have said that prevent the friendly adjustment of an admittedly difficult question. When a medical man's education cost 50 per cent. less and when the expenses of medical treatment were lower in every way a lower rate of payment was acceptable. Now, not only is professional education much dearer, while professional expenses are much higher, but deliberate attempts are made on all sides to exploit the medical man. He is to take the terms offered to him, be is to attend at charity prices upon men whose incomes are larger than his own, and if he resists he knows that an attempt will be made to subsidise a professional rival. Naturally, the medical man does not feel well disposed to organisations which are run upon lines of such direct animosity to himself. And equally naturally vulgar insults, such as those attributed to Mr. Bradwell, do not help towards a settlement. To attribute to medical men "soulless greed," to say that they have become "very insulting, contemptuous, and negligent of their duties," and to compare them to highway robbers is not only unmannerly, it is silly. Sick clubs cannot exist without medical men. The one great thing that friendly societies have to offer to their *clientèle* is medical advice and treatment. Elementary commonsense would show that attempts to find out the real reasons for the present state of friction are the work before the reformer and that mud-slinging is an error in tactics.

IN PRAISE OF RAMSEY.

THE town commissioners of Ramsey, Isle of Man, are circulating a letter in praise of the place from the pen of Mr. Hall Caine. We do not know of any special claims that Ramsey has upon the attention of the medical profession but we are certain that the town commissioners could have found no more unfortunate advocate. Medical men are not likely to forget the onslaught that was made upon hospital administration by Mr. Caine in a novel purporting to describe the life of a nurse. The serious errors made in that book were patent to every medical man who had been trained in a London hospital and no confidence will be attached to Mr. Caine's advocacy when he praises a town in the Isle of Man.

MIDWIFERY PUPILAGE.

To the Editors of THE LANCET.

SIRS,—I wish to get employment with a medical man as a pupil to attend labour cases under his instruction so as to qualify myself in this way for sitting at the midwifery portion of the final examination of the Conjoint Board. I hope to be able to come to an arrangement with some parish medical officer.—I am, Sirs, yours faithfully,

May 28th, 1906. J. A. T.

EXCESSIVE SECRETION OF SEBUM.

Sebum writes: "Can any reader supply information as to drugs acting on the sebaceous secretion? Has atropine been tried in severe and long-standing cases of excessive secretion?"

THE CURE OF PARALYSIS AGITANS.

WE have received several communications in the last month from members of the public asking for information as to the reported cure of locomotor ataxy and paralysis agitans upon some new systems. Two at least of our interrogators have been prompted by quack advertisements. The answer to all is the same. The symptoms of these diseases are not produced by the same causes and the success of recognised treatment depends upon the particular cause. The family medical adviser should be consulted, and he will recommend to the patient where he should seek further advice if consultation is desired with regard to diagnosis, prognosis, or treatment. The advertisements upholding certain "new treatments" and foreign spas are not to be relied upon.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—The notice containing my name in the *Ormskirk Advertiser* of Thursday, May 24th, was done without my knowledge or sanction and the editor has been asked kindly to see that it is not repeated.

I am, Sirs, yours faithfully,

Southport, May 25th, 1906. A. A. BRADBURNE, F.R.C.S. Edin.

THE A. E. JONES FUND.

To the Editors of THE LANCET.

SIRS,—Will you allow me to acknowledge in THE LANCET the receipt of the following subscriptions?

I am, Sirs, yours faithfully,

45, Queen Anne-street, W., May 29th, 1906. C. WYNN WILLIAMS.

	£	s.	d.		£	s.	d.
Anon.	5	0	0	Dr. James Taylor	1	1	0
Mr. R. Marcus Gunn ...	3	3	0	Dr. Charles Bolton	1	1	0
Dr. W. H. Allchin	2	2	0	Mr. J. Jenkins	1	1	0
Mr. E. Nettleship	2	2	0	Mr. Leslie Paton	1	1	0
Mr. Percy Flemming ...	2	2	0	Dr. P. T. H. Stedman ...	1	1	0
Dr. F. T. Roberts	2	2	0	Mr. C. B. Fairbank	1	1	0
Dr. H. Batty Shaw... ...	2	2	0	Mr. Wilfred B. L. Trotter	1	1	0

VISIT OF THE CHEMICAL AND PHYSICAL SOCIETY TO MESSRS. BURROUGHS, WELLCOME AND CO.'S WORKS.

A REPRESENTATIVE gathering of members of the Chemical and Physical Society of London paid a visit to Dartford on May 22nd, where they inspected the Wellcome Chemical Works and Laboratories and expressed themselves as much interested in the methods and apparatus employed. The visit closed with an inspection of the Wellcome Club and Institute, where the staff club house, the gymnasium, the library building and club house for lady employees, and the extensive sports fields came in for much commendation.

THE NEW NAVY TOBACCO.

WE are asked to state that the Navy Tobacco which was reported upon in our Analytical Notes published on Nov. 4th, 1905, p. 1358, can be obtained retail from Messrs. Cohen and Weenen. The firm whose name was mentioned in the Analytical Note are only wholesale agents. Messrs. Cohen and Weenen's address will be found in our advertising columns.

Fairplay.—Speaking generally we agree with our correspondent. We think, however, that the Local Government Board would certainly decline to take the suggested step. In the present condition of local government it is impossible that all medical officers of health should be in possession of the diploma. Where the responsibilities are of a certain character and magnitude the Local Government Board has decided that the diploma must be held but in other localities the possession of the diploma for many obvious reasons ought not, *ipso facto*, to determine the election of a medical officer of health over the head of a candidate without the diploma. The possession of the diploma is a good testimonial but the Local Government Board would not be likely to attempt to make it imply more.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (9th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Mr. H. T. Hicks, Dr. R. H. Bell, and Mr. D. Drew (introduced by Dr. Tate). Short Communication:—Dr. W. H. B. Brook: Three Cases of Glycosuria of Pregnancy. Paper:—Dr. G. E. Herman: A Case showing (*a*) Uterine Contraction without Retraction, (*b*) Prolonged High Temperature of Nervous Origin.

THURSDAY (7th).—NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. Clinical Cases.

FRIDAY (8th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Kensington Town Hall).—8.30 P.M. Cavendish Lecture:—Sir William Macewen. Followed by Conversazione and Exhibition.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (4th).—LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M. Operations. Sir D. Duckworth: Medicine. 3.15 P.M. Mr. W. Turner: Surgery. 4 P.M. Dr. StClair Thomson: Throat and Ear. Out-patient Demonstrations:—10 A.M. Surgical and Medical. 12 noon. Ear and Throat.

TUESDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. E. Squire: Clinique. (Medical.) 5.15 P.M. Lecture:—Mr. R. Johnson: The Diseases of the Breast which may Resemble Carcinoma.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M. Medical and Surgical Wards. 10.30 A.M. Gynæcological Operations. 11 A.M. Operations in Out-patient Department. 2 P.M. Medical and Surgical Clinics. 2.30 P.M. Operations. Skin. Ear and Throat. 3 P.M. Dr. Taylor: Medical Cases in Wards. 5 P.M. Dr. Low: Bilharzial Disease.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M. Operations. Dr. R. T. Hewlett: Medicine. 3.15 P.M. Mr. Carless: Surgery. 4 P.M. Mr. M. Morris: Diseases of the Skin. Out patient Demonstrations:—10 A.M. Surgical and Medical. 12 noon. Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. F. Buzzard: Muscular Atrophy.

NORTH-EAST LONDON POST GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture:—Dr. R. M. Leslie: Prognosis in Diseases of the Spleen and Ductless Glands.

WEDNESDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. P. Paton: Clinique. (Surgical). 5.15 P.M. Lecture:—Dr. B. Abrahams: The Rest Cure.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M. Medical and Surgical Wards. Dr. Saunders: Diseases of Children. 11 A.M. Operations in Out patient Department. 12 noon. Dr. Russell: Medicine. 2 P.M. Medical and Surgical Clinics. 2.30 P.M. Operations. Dr. Robinson: Diseases of Women. 3 P.M. Mr. Bidwell: Intestinal Surgery. Dr. Cole: Clinical Cases (at Hanwell Asylum).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M. Operations. Dr. F. Taylor: Medicine. 3.15 P.M. Mr. M. Robson: Surgery. 4 P.M. Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M. Surgical and Medical. 11 A.M. Eye.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration:—Dr. A. Wylie: Pharynx.

THURSDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical). 5.15 P.M. Lecture:—Mr. A. H. Tubby: Surgical Diseases of Children.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M. Medical and Surgical Wards. Dr. Low: Tropical Medicine. 11 A.M. Operations in Out-patient Department. 2 P.M. Medical and Surgical Clinics. 2.30 P.M. Operations. 4 P.M. Mr. Edwards: Surgical Cases in Wards. 5 P.M. Mr. Keetley: Appendicectomy, especially in its Relation to Appendix Abscess.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M. Operations. Dr. G. Rankin: Medicine. 3.15 P.M. Sir W. Bennett: Surgery. 4 P.M. Mr. M. Davidson: Radiography. Out patient Demonstrations:—10 A.M. Surgical and Medical. 12 noon. Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M. Mr. Waterhouse: Demonstration (Surgical). (Post-Graduate Course.)

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Clinical Evening.

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Dr. Hutchison: The Treatment of the Various Forms of Diarrhœa in Infancy and Childhood.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Prof. W. J. Sollas: Man and the Glacial Period. (Lecture III.)

FRIDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. L. Lack: Clinique. (Throat).

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M. Medical and Surgical Wards. 10.30 A.M. Gynæcological Operations. 11 A.M. Operations in Out-patient Department. 2 P.M. Medical and Surgical Clinics. 2.30 P.M. Operations. Dr. Abrahams: Skin. Throat and Ear. 5 P.M. Mr. C. Williams: X Rays. Diagnosis and Treatment (with lantern slides).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M. Operations. Dr. R. Bradford: Medicine. 3.15 P.M. Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M. Surgical and Medical. 12 noon. Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. Ormerod: Ataxic Paraplegia.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—9 P.M. Prof. Sir James Dewar: Studies on Charcoal and Liquid Air.

SATURDAY (9th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M. Medical and Surgical Wards. Dr. Ball: Throat, Nose, and Ear Operations. 11 A.M. Operations in Out-patient Department. 12 noon. Dr. Russell: Medicine. 2 P.M. Medical and Surgical Clinics. 2.30 P.M. Operations. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M. Operations. Out-patient Demonstrations:—10 A.M. Surgical and Medical. 11 A.M. Eye.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 31st, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 25	30·03	S.W.	...	113	63	47	49	55	Cloudy
" 26	30·02	S.	...	76	63	50	50	53	Raining
" 27	29·93	S.W.	0·27	92	66	51	56	58	Raining
" 28	30·00	S.W.	3·08	125	74	58	59	62	Cloudy
" 29	30·06	W.	...	123	73	59	59	63	Cloudy
" 30	30·05	WNW	...	117	69	51	53	58	Cloudy
" 31	29·70	W.	0·02	81	63	55	56	59	Cloudy

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